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PROBLEM OF THE NEAR DEAF AND THE DEAF*

CHARLES W. RICHARDSON, M.D.

WASHINGTON, D. C.

In the otologic field, during the last forty years, we have made masterful progress along many lines; but in the field of the humanitarian aspect, in sociology of the near deaf and the deaf, we have not as a body shown that aptitude and endeavor that becomes us as one of the great specialties of medicine. It has been the experience in many lines of medical endeavor that the medical profession has been too much engrossed with the scientific study and the practical application of deduction drawn therefrom to give its attention as much as desired to the prevention, humanitarian and sociological problems that lie before but just outside its actual line of endeavor. As a result of this want of interest and thorough consideration of the near medical problems which have and are constantly arising, many lay organizations have been created, which threatened or have taken away from the profession that leadership which should be vested in and rightfully belongs to the medical profession.

In all the field of medicine there is no more urgent call than that made by a large body of our citizens, the near deaf and the deaf, for sympathy, help, efficient aid and cooperation of effort to ameliorate their physical defect. The near deaf or the deaf are not nor should they be considered physically derelict: they are normal human beings deprived partly or completely of a single special sense. In the past it has been the time-honored method of most otologists, when all physical help that could be offered for these individuals failed, to turn them forth to become hopeless derelicts or furnish food for the quacks. Some few otologists with open hearts and broad conception of their duty to their fellow men were requested to investigate the betterment of the near deaf and the deaf by some laymen and teachers of the deaf. In New York these otologists, with others interested in the problem, instituted an organization in 1910, which was designated the New York Organization for the Hard of Hearing. From this parent organization other clubs were gradually created, until at present many of the larger cities throughout the Union have such clubs. These organizations have always sought the guidance and assistance of the profession in their endeavor. In every community wherein they exist they have obtained the support of the leading otologists, and have usually placed them in their directorate. These organizations seek to meet all the social, physical and sociological requirements of their membership. They furnish teachers for speech-reading and conduct speech-reading classes; offer experience in procuring proper tone amplifying aids to hearing suitable for the individual affected; form vocational course and employment agents; offer club attractions which bring these people together under happier surroundings than they were formerly accustomed to, and aid in many other ways to make life more happy and worth while to the hard of hearing.

In 1919 these organizations, which now exist in thirty-five cities, formed a national organization known as the American Federation of the Organizations for the Hard of Hearing. This federation is an active, enthusiastic corporation composed of a body of intellectually alert American citizens who know what they want and are adopting the best methods to attain it. Looking into their faces, as I did in addressing them last year in their annual meeting, one could not but be impressed with their earnestness of purpose and desire for advice and direction. All otologists should be in touch with the organization in their immediate community, or with the federation, in order to aid in guiding their work and assist them in shaping their course. Fortunately for the federation and for otology, the first three presidents of the federation have been otologists —Dr. Wendell C. Phillips, Dr. Harold Hays and Dr. Gordon Berry. The third president of the federation has taken a keen interest in his work for the organization and has mapped out a most comprehensive plan of activities, which have been accepted, and which will appeal strongly to all otologists. Thanks to such men as Wendell Phillips, Harold Hays and Harold Walker, this growing organization affecting our specialty so closely has been held true to its course. The federation looks to us, demands our sympathy, seeks our cooperation, and expects us to lend a helping hand whenever it requests it. We on our part must recognize the call to duty, meet the obligation cheerfully, and evidence our appreciation of the confidence and honor thus demonstrated.

The conservation of hearing is only a method of applied preventive medicine. It is that form of preventive medicine in which the otologist is most actively engaged. We, through our activities in the last quarter of a century, have done much in the conservation of the hearing, but there is still much that is desirable and attainable in this field of activity. To be sure, we have only to do with one of the special senses, but all must recognize the fact that the impairment of the sense of hearing or its loss causes a great deal of unhappiness to a great many persons, as well as great economic loss

* Chairman's address, read before the Section on Laryngology, Otology and Rhinology at the Seventy-Sixth Annual Session of the American Medical Association, Atlantic City, N. J., May, 1925.

to a large body of our people. We know among ourselves the measures that we are adopting, the advice that we are giving and the treatment that we are employing that save many ears to normal hearing and prevent countless others from being affected at all; but I fear that we are not presenting this to the laity in the understandable way that we should. Other branches of the medical sciences bring before the laity, in readable and entertaining articles, what should be done along preventive lines and why it should be done. Very little of such material has been circulated as to what otologists have been and are doing in the line of preventive medicine. We must assume a more aggressive attitude. Laymen should be taught through semimedical and lay journals the methods to be pursued with regard to this conservation, so that we may enlist their cooperation with an understanding mind. The laity is farther advanced along lines of conservation of hearing than it was twenty-five years ago, but there is much instruction yet needed.

An important field of investigation, of great interest to otology, has been undertaken under the auspices of the National Research Council, of the resident and day schools for the deaf of the United States. The National Research Council was organized in 1916, by the National Academy of Science. May 11, 1918, President Wilson issued an executive order stating, "The National Academy of Science is therefore requested to perpetuate the National Research Council," and then enumerated its duties. This investigation was first brought to the attention of the Committee on the Deaf Child by Dr. Max Goldstein of St. Louis. At a convention of the American Institutes for the Deaf and the conference of superintendents and principals of schools for the deaf, a committee was appointed to further this investigation and solicit funds to defray the expenses of the investigation.

Various efforts have been made to interest the various foundations in defraying the expenses incident to the campaign. After others had failed, I attempted to interest one of the great foundations to the extent of financing the investigation. The interest aroused was great, but at that time the foundation found it inexpedient further to obligate itself financially. I then turned my thoughts to the National Research Council and presented the subject and appeal to the chairman of the Division of Educational Relations, Dr. Vernon Kellogg. Dr. Percival Hall, president of the Gallaudet College, was at the same time working in the same field. Unacquainted with each other's efforts, but working along similar lines in harmony, we succeeded in interesting Dr. Kellogg, who obtained the necessary action which brought about the investigation under the auspices of the National Research Council. The funds have been supplied by the Laura Spelman Rockefeller Foundation.

In May, 1924, I was notified through the secretary of the council that the survey had been granted. A committee on survey of schools for the deaf was named, consisting of the chairman of the Division of Educational Relations; the chairman of the Division of Medical Science; the chairman of the Division of Anthropology and Psychology; President Percival Hall, Gallaudet College, representing the Convention of American Institutions of the Deaf, and myself, representing the permanent Committee of the Deaf Child of the American Medical Association. This committee was a creature of the National Research Council. It has had an additional member named, Dr. Crouter, as representing the Association for the Promotion of the Teaching of Speech to the Deaf.

The investigation is progressing satisfactorily along all lines. The material is coming in slowly, as would be expected, and when received will require probably six months or more to tabulate. As medical adviser to the committee, I have found the work very strenuous. I wish here publicly to express my appreciation for the efforts of otologists all over the land who, through their efforts, have striven to make the practical medical examination a success.

1337 Connecticut Avenue.

TRYPARSAMIDE IN THE TREATMENT OF NEUROSYPHILIS

FURTHER OBSERVATIONS

UDO J. WILE, M.D.
AND
LESTER M. WIEDER, M.D.
Professor of Dermatology and Syphilology and Instructor in Dermatology and Syphilology, Respectively, University of Michigan Medical School
ANN ARBOR, MICH.

In June of 1924, we [1] presented a preliminary report on the use of tryparsamide in cases of neurosyphilis. Our earlier report embodied a study of fifty cases of various types of cerebrospinal syphilis. We have extended our studies now to include eighty-five carefully selected patients, whose treatment has been followed for about a year and a half, and who have received a total of more than 800 injections as well as mercury, in the form either of inunctions or of injections, when this was possible, in the interval period between courses of tryparsamide.

Of the eighty-five cases, thirty-two were clear cut cases of general paresis, twelve of taboparesis, seven of tabes dorsalis, thirty-three of diffuse cerebrospinal syphilis, and one of acute syphilitic basilar meningitis (Table 1).

TABLE 1.—*Effect of Treatment*

Diagnosis	Cases	Effect on Cell Count	Effect on Solids	Effect on Wassermann Reaction	Effect on Colloidal Gold Test	Clinical Improvement
General paresis	32	8	5	1	1	7
Taboparesis	12	4	3	2	0	2
Tabes dorsalis	7	2	0	0	0	2
Cerebrospinal syphilis	33	8	8	3	3	12
Acute basilar meningitis	1	1	0	0	0	1
Total	85	23	16	6	4	24

EFFECT OF TREATMENT

In the present study, we attempt to show the effect of the treatment on the clinical progress of the disease. Paralleling such observations, we set forth the effect of the drug in the various case groups on the abnormal constituents of the spinal fluid, and lastly, we record the untoward symptoms that we have noted in a very few cases (Table 2).

Effect on Cell Count (Table 1).—Turning first to the increased cell count in the spinal fluid and the effect on this of the tryparsamide injections, we found that, of thirty-one cases of the entire group in which pleocytosis was present, an appreciable reduction occurred

1. Wile, U. J., and Wieder, L. M.: Tryparsamide in the Treatment of Neurosyphilis, J. A. M. A. 83: 1824-1826 (Dec. 6) 1924.

in twenty-three. Included in this group are eight cases of paresis, eight of the diffuse type of cerebrospinal syphilis, four of taboparesis, two of frank tabes dorsalis, and one of basilar meningitis.

Fifty-four cases of the entire group showed no marked change in the cell count, and no effect, therefore, on the pleocytosis could be recorded in this group. Failure to influence existing pleocytosis occurred in eight cases. This group included three cases of paresis, three of cerebrospinal syphilis, one case of taboparesis, and one of tabes.

As illustrating the extent to which pleocytosis could be influenced, in one case in which the cell count was 250 per cubic millimeter, this was reduced following a single injection to 83 cells, coincident with marked clinical betterment.

Effect on Albumin and Globulin.—From the standpoint of globulin and albumin, we found, as our previous studies have indicated, that these two were practically parallel in every case in which they were increased. We therefore include both of these constituents of the fluid under the head of "organic solids." Of the entire group, seventy-nine cases showed an increase in the fluid in both albumin and globulin. A material reduction, however, of these constituents of the fluid could be determined only in sixteen cases of this group (Table 1). In spite of this fact, many of the cases in which reduction did not occur were clinically improved cases.

TABLE 2.—*Untoward Visual Reactions*

Type	Cases	Type of Involvement	Time of Occurrence	Final Result
General paresis.....	2	Symptomatic object. neg.	After 3d injection	Improved
	1	Symptomatic contraction of form fields	After 2d injection	Improved; objective examination unchanged
Taboparesis.....	1	No symptoms; contraction of color field; neuroretinitis	After 6th injection	Unchanged
Diffuse cerebrospinal syphilis	1	No symptoms; moderate contraction of form fields	Noted following 12th injection	Patient did not return for reexamination
	1	Blurring; neuroretinitis; all fields contracted	Following 3d injection	Symptoms disappeared; objective examination unchanged

Of the sixteen cases in which organic solids were found appreciably decreased, five occurred in cases of paresis, three in taboparesis, and eight in diffuse cerebrospinal syphilis.

Effect on the Wassermann Reaction.—In this important phase of the spinal fluid, we are unable to show any very striking percentage of cases in which the Wassermann reaction had been materially influenced, even after as many as twenty-four injections or four courses of tryparsamide. This observation entirely confirms the view expressed in our preliminary report. Thus, of the eighty-five cases studied, in only six was the Wassermann reaction reduced from positive to negative. Such reduction occurred in three cases of cerebrospinal syphilis, in two cases of taboparesis and in one case of general paresis. Many of the cases most strikingly benefited from the clinical standpoint were as strongly positive in the fluid at the end of the treatment as before tryparsamide therapy was instituted.

Effect on Colloidal Gold Curve.—The colloidal gold reaction seemed to be as little influenced by treatment in our cases as was the Wassermann reaction. A complete reduction to normal from the gold curve, characteristic of the type involvement, occurred in three cases of cerebrospinal syphilis, and in a single one of paresis. A change from the paretic to the tabetic type occurred in three cases under treatment, all of which were typical cases of general paresis. A single case showed a curve typical of the diffuse type of cerebrospinal involvement when therapy was instituted, and, although a complete reduction to normal took place during the first course, during the second course the gold curve was found to be of the paretic type on six occasions.

TABLE 3.—*Root Pains and Crises*

Type	Unimproved: Root Pains	Unimproved: Gastric Crises	Improved	Time of Improvement	Total
Tabes dorsalis.....	3	1	1	Second course	5
Taboparesis.....	2	1	1	First course	4
Diffuse cerebrospinal syphilis..	..	..	3	First course	3
Total.....	5	2	5	.....	12

Effect on the Clinical Symptoms.—Of the entire group, twenty-four patients on critical examination were considered to be clinically improved. Such improvement occurred in seven cases of paresis, two of taboparesis, two of frank tabes, twelve of the diffuse cerebrospinal type, and one of acute basilar meningitis.

Ten cases of the entire group were asymptomatic at the outset, and no clinical improvement, therefore, could be recorded in this number. The character of the improvement noted is given somewhat more in detail in Table 3. Root pains, including also crises, were found improved in five cases out of twelve in which this symptom was present.

Improvement in general nutrition, including gain in weight, was found in all cases in which clinical improvement could be recorded. An improvement in the apparent deterioration noticed at first examination is indicated in the fact that of eighteen cases of paresis, seven patients who had previously been institutionalized were discharged to their homes. In general, these patients became more tractable and less disoriented, and in a few, a resumption of occupation for the time, at least, was possible. The improvement noted in these cases can well be summed up in comparing them to cases of early paresis in the stage of remission plus a marked gain in weight and general appearance. Under "gain in weight," this was noted as high as 30 pounds (13.6 kg.) in two cases, and when such occurred, it varied between this amount and 5 pounds (2.3 kg.).

TABLE 4.—*Deterioration; No Improvement Despite Two or More Courses of Tryparsamide Therapy*

Type	No. of Injections	Result	Duration of Observation	Time of Greatest Deterioration
General paresis	12	Worse	16 mo.	Progressive
General paresis	12	Worse	15 mo.	Following second course; rapid
General paresis	12	Died	.....	Died during seizure
General paresis	15	Unimproved	12 mo.	Stationary
Taboparesis...	17	Unimproved	13 mo.	Stationary
General paresis	18	Worse	9 mo.	During second course
General paresis	24	Unimproved	17 mo.	Stationary

Seven patients seemed definitely to derive no benefit from treatment, even though such was carried to sufficient length to expect some change. As may be seen from Table 4, three patients with paresis became distinctly worse, two with paresis and one with taboparesis were unaffected by treatment, and one patient with paresis died following a seizure eight weeks after the completion of his twelfth injection. Nine further cases of paresis in which but one or two courses were given progressed sufficiently rapidly as to warrant institutional commitment. No change for the better was found in the spinal fluid in any of the unimproved group.

UNTOWARD EFFECTS OF TREATMENT

As our patients were carefully selected and subjected to painstaking examination with regard to optic nerve involvement, we can record a minimum degree of untoward effect, as a result of the injection (Table 2).

Symptomatic visual reaction (blurring of vision) occurred in three cases of paresis, and in all these this symptom disappeared and did not reappear with further treatment. A single case of diffuse cerebrospinal syphilis developed blurring with neuroretinitis. In this case the patient remained symptomatically improved, but retained a slight contraction of the form field.

TABLE 5.—*Time in Course of Treatment at Which Greatest Improvement Was Noted*

Type	1st-6th Injection	6th-12th Injection	12th-18th Injection	18th-24th Injection	Total
General paresis	6	0	0	1	7
Taboparesis	0	2	0	0	2
Tabes dorsalis	1	1	0	0	2
Cerebrospinal syphilis	8	4	0	0	12
Acute basilar meningitis	1	0	0	0	1
Total	16	7	0	1	24

Color field contraction, noted on examination but not noticed by the patient, was found on single examination of a case of taboparesis. This has remained unchanged up to the present time. Contraction of the form field at the end of the second course of injections occurred in a single case of cerebrospinal syphilis in which previous examination had been entirely negative. To sum up, no serious permanent injury occurred in any of our cases.

Jaundice was noted in a single case of paresis following the seventh injection. In one case in which the clinical improvement was the most noticeable, that of a physician who was able to resume his practice, vomiting five or six hours after the injections was noted in almost all of the twenty-eight injections given.

Urinary incontinence occurred in three cases of paresis while under treatment, sphincter control being regained in only one case. Incontinence was improved following treatment in two cases of tabes and one of taboparesis.

Four patients of the entire group died; one with seizures eight weeks after the twelfth injection, one of advanced paresis one week following the first injection, and one of taboparesis two months after the sixth injection, in which case, in spite of treatment, marked progressive deterioration was noted. One patient with cerebrospinal syphilis with spastic paraplegia succumbed five weeks after the sixth injection, but we are not in possession of the details of the death.

COMMENT

Substantiating our previous observation, we could establish no striking parallelism between clinical betterment and spinal fluid change, except so far as this occurred in the diminution in a few cases of the lymphocytic elements of the fluid.

Of the small group in which a marked change in spinal fluid constituents was noted, this improvement was paralleled by clinical betterment. On the other hand, many cases, including some showing most striking clinical betterment, showed no corresponding change in spinal fluid findings.

We made an observation of some value in connection with the clinical improvement noted. Of the twenty-four cases in which decided improvement was noted, an indication of this was evident in sixteen after the first course of injections. Seven more of this group showed improvement after the second course, and only a single patient showed improvement thereafter. If this observation is correct, it would seem to be of considerable prognostic value. It must not, however, be understood from this that, in the improved cases, treatment should not be continued considerably past the time that such improvement is noted. We reiterate our previous statement that untoward symptoms, particularly those involving the eyegrounds, can effectively be guarded against by painstaking preliminary examination.

CONCLUSIONS

1. Continued observation, with a larger number of cases and over a longer period of observation, has convinced us of the value of tryparsamide in producing clinical betterment in almost 30 per cent. of a carefully selected group of cases.

2. In the main, clinical improvement was not paralleled by striking changes in the spinal fluid, many of the most strikingly improved patients retaining, after protracted treatment, the changes in the fluid that were found at the original examination.

3. In a small group of cases in which spinal fluid change was noted, clinical betterment was found to be associated with such improvement.

4. When improvement occurred clinically, this was indicated in a large majority of the cases during the first and second courses of treatment.

Oxygen in Pneumonia.—The object in giving oxygen is so to increase the partial pressure of the gas in the lung alveoli, and thereby the oxygen saturation of the blood, that anoxemia cannot develop; i. e., to get that volume of oxygen into the lungs which will completely abolish or, better, prevent cyanosis. As Meakins has shown, the aim should be to forestall and prevent cyanosis in all cases of pneumonia, for, if oxygen therapy be delayed until the onset of cyanosis, the patient will have already sustained damage to the central nervous system and myocardium. There is abundant evidence that delirium and circulatory failure in pneumonia can be prevented by the early and efficient use of oxygen; but, if these be allowed to appear or continue for a few hours, oxygen therapy often fails to relieve them. Meltzer realized this and suggested that failure of oxygen therapy might frequently be due to its use being too long delayed. . . . We have frequently seen cases of pneumonia in which oxygen failed to relieve delirium after the latter had been present for several hours. On the other hand, oxygen administration seldom fails to relieve slight delirium or the agitated restlessness so commonly present in pneumonia patients, provided it be carried out efficiently as soon as these symptoms become manifest.—Davies, H. W., and Gilchrist, A. R.: Oxygen Therapy, *Edinburgh M. J.*, May, 1925.

TRANSFUSION OF LYMPHOCYTES

THEIR RAPID DISAPPEARANCE FROM THE PERIPHERAL CIRCULATION OF MAN *

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The colorless corpuscles were noted by John Hunter and described by his pupil, Hewson, in 1788. Neuman recognized in 1869 that the bone marrow was a source of their origin, and Virchow, in 1871, defined lymphocytes and demonstrated that they were formed in lymphoid tissue. Since then much has been written concerning the production of white blood corpuscles, their distribution and their function. Little, however, is known of what becomes of them, or what permits the different kinds to remain at one or another level. Bunting and Huston [1] have recently described the fate of the lymphocytes in rabbits. They have shown that, although the count of the circulating lymphocytes remains constant, more of the lymphocytes enter the circulation from the thoracic duct in twenty-four hours than can be accounted for by those present in the blood at any one time. They found that these cells were not destroyed in the blood stream, but migrated from the vessels into mucous membranes and through them to their surface. This occurred chiefly in the gastrointestinal tract. The rate of removal from the circulation of white blood corpuscles in man has not been determined satisfactorily. Information on this subject was sought by the transfusion of blood from a patient with chronic lymphatic leukemia to one with advanced lymphosarcoma with lymphopenia. The possibility that increasing the number of lymphocytes in the patient would be beneficial was considered.

The recipient was an emaciated woman, aged 46, weighing 75 pounds (34 kg.) in an advanced stage of generalized lymphosarcoma, which was of at least six years' duration. Two years after its onset, the diagnosis was confirmed by examination of an excised lymph node. She had received numerous treatments with radium and roentgen rays of short wave length over the regions of enlarged lymph node and over the spleen. At the time of the transfusion there were in the axillae and groins lymph nodes measuring from 3 to 6 cm. in diameter, and a few smaller ones were palpable in different parts of the neck. The mediastinal nodes were enlarged moderately and those within the abdomen, especially along the spine, were considered to be distinctly hypertrophied, because of the type of pain she experienced.

Table 1 shows the counts of the white blood corpuscles for some days both before and after transfusion with the lymphatic leukemia blood. Before this procedure was anticipated and eleven days before it was done, the patient received a transfusion of blood from a normal person, which was followed in six days by a treatment with radium emanation. The patient's red cell count in the eleven days before the transfusion with the blood containing many lymphocytes varied between 3.5 and 4.6 million per cubic millimeter, and the hemoglobin varied between 84 and 98 per cent. In the three days following transfusion, the red cell count and hemoglobin percentage fluctuated within about the same range. Immediately after the transfusion, the red cells were 3.6 million per cubic millimeter. These cells were moderately achromic and varied somewhat more than normal in size. There were no microcytes or macrocytes. A rare immature red cell was observed. The blood platelets were found constantly slightly increased, and not infrequently there occurred an abnormally large one.

The donor, with chronic lymphatic leukemia, was a woman, aged 57, who weighed 158 pounds (72 kg.). Her illness had existed for at least four years, and during this time she had received six treatments with radium. She was in comparatively good physical condition and able to do a full day's work without abnormal

TABLE 1.—*White Blood Cell Counts of the Patient with Lymphosarcoma*

	White Blood Cells, Thousands per C.Mm.	Polymorphonuclear Neutrophils, per Cent.	Polymorphonuclear Eosinophils, per Cent.	Polymorphonuclear Basophils, per Cent.	"Large Mononuclears," per Cent.	Large and Atypical Lymphocytes, per Cent.	Small Lymphocytes, per Cent.	Total Lymphocytes, per Cent.	Total Lymphocytes, per C.Mm.
December 5, 9 a. m., Transfusion of 600 c.c. of normal blood									
10 a. m.	7.5	64.0	1.0	1.0	20.6	7.4	6.0	13.4	1,005
December 6, 10 a. m.	5.2	63.5	1.5	0.5	19.5	7.0	8.0	15.0	780
December 12, 10 a. m.	6.2	67.0	0.25	0.5	22.25	3.75	6.25	10.0	620
7 p. m., Radium, 920 Mc. H., over groin									
December 13, 10 a. m.	7.9	70.5	0	0	12.0	8.5	9.0	17.5	1,382
December 14, 10 a. m.	6.8	58.5	0.25	0.25	26.5	8.25	5.75	14.0	932
December 15, 10 a. m.	6.2	66.45	0	0.57	17.73	6.4	8.85	15.25	945
December 16, 8:45 a. m.	6.9	70.25	0.75	0.25	16.15	7.0	5.6	12.6	869
9:45 a. m.	6.4	69.0	0.5	0	15.0	4.38	11.12	15.5	992
10:30 to 10:55, Transfusion of 450 c.c. of blood from a patient with chronic lymphatic leukemia									
11:00 a. m.	8.8	44.5	0.5	0	12.5	9.5	33.0	42.5	3,740
11:35 a. m.	6.9	65.0	0	0	9.25	5.25	20.25	25.5	1,759
12:10 p. m.	5.6	62.5	0	0.25	11.75	6.25	19.25	25.5	1,428
1:15 p. m.	6.2	71.0	0	0	13.5	4.25	11.0	15.5	961
2:15 p. m.	6.7	68.3	0.5	0.25	11.45	6.7	12.8	19.5	1,306
3:15 p. m.	5.8	61.5	0	0.25	11.75	5.13	11.37	16.5	957
December 17, 11:00 a. m.	9.2	73.5	0	1.0	12.0	3.5	10.0	13.5	1,242
4:05 p. m.	9.2	77.0	0.3	1.0	11.4	6.3	4.0	10.3	947
December 18, 10:45 a. m.	5.7	70.5	0	1.0	11.5	4.5	11.5	16.0	912
December 19, 10:00 a. m.	9.3	71.25	0.5	0.25	12.25	5.25	10.5	15.25	1,404
December 20, 6:50 p. m., Radium, 1,000 Mc. H., over 10th and 11th vertebrae									
December 23, 10:00 a. m.	6.5	60.9	0.73	0.35	19.4	10.5	8.12	18.62	1,210

An occasional myelocyte was observed in several of the preparations.

* From the Medical Service of the Collis P. Huntington Memorial Hospital of Harvard University.

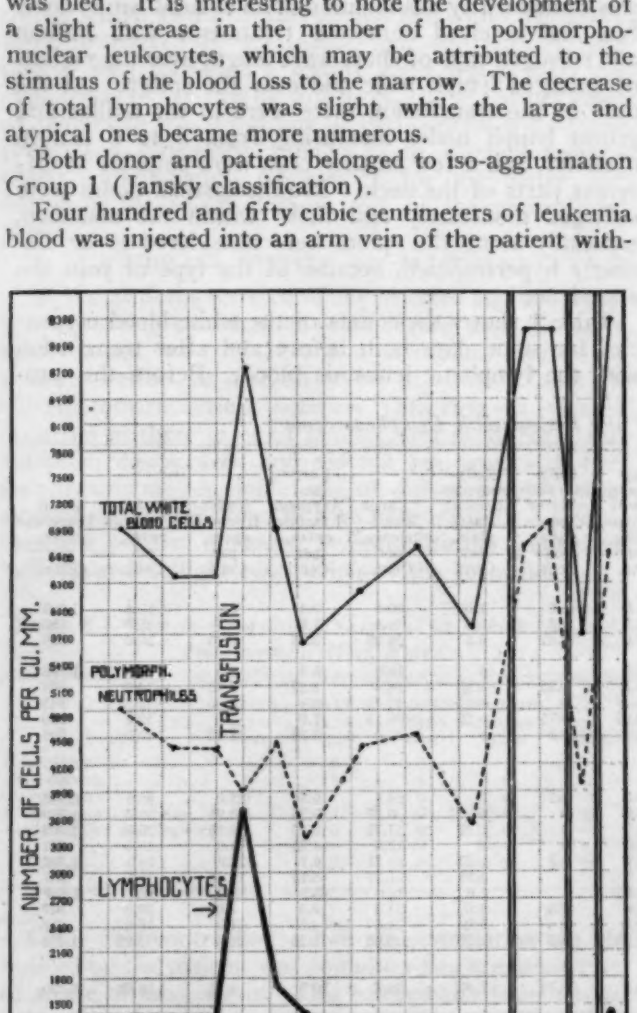
* This paper is No. 45 of a series of studies on metabolism from the Harvard Medical School and allied hospitals. The expense of this investigation has been defrayed, in part, by a grant from the Proctor Fund of the Harvard Medical School for the study of chronic disease.

1. Bunting, C. H., and Huston, J.: Fate of the Lymphocyte, J. Exper. Med. **33**: 593 (May) 1921.

fatigue, at the time she donated blood. The cytologic character of the red cells and the numbers of blood platelets were essentially normal. Table 2 shows the blood counts for a short period before and after she was bled. It is interesting to note the development of a slight increase in the number of her polymorphonuclear leukocytes, which may be attributed to the stimulus of the blood loss to the marrow. The decrease of total lymphocytes was slight, while the large and atypical ones became more numerous.

Both donor and patient belonged to iso-agglutination Group 1 (Jansky classification).

Four hundred and fifty cubic centimeters of leukemia blood was injected into an arm vein of the patient without the addition of an anticoagulant. The recipient experienced no untoward reaction of any sort. Frequent observations were made of the patient's temperature, pulse rate and respiration rate in the immediate hours and days following the transfusion. The temperature remained between 98 and 98.6 F. and the pulse close to 100, and the respiration about 20 a minute. The patient appeared symptomatically rather more comfortable for a few days following the transfusion, but then slowly declined until death, twenty-five days later. There was no demonstrable change in the size of the lymph nodes or spleen after the transfusion, except that a single node in the cervical region enlarged considerably during the three days after the blood was given. There was no evidence that the leukemia blood benefited the patient in any way differently than normal blood. Four days after the transfusion, radium emanations were applied over the lower thoracic spine, and four days later over the epigastrium. This was done in an effort to alleviate painful symptoms believed to be due to enlarged lymph nodes within the abdomen.



White blood cell counts of patient before and after transfusion with lymphatic leukemia blood.

The blood cell counts were made by standard technic. The white cell counts were made in duplicate, and in all instances were in close agreement with one another. The average is recorded. Each differential count was made from both upper and lower cover glass blood films stained with Wright's stain. In each instance we both counted from 200 to 500 cells, and the figures recorded are the average of the two results.

The chart shows at a glance the marked increase (about 400 per cent.) in the recipient's blood of the number of lymphocytes per cubic millimeter immediately following transfusion, while data in Table 1 record that the percentage of white cells that were lymphocytes increased at this time about threefold, with coincident reduction chiefly of the polymorphonuclear neutrophils. There then occurred within half an hour a marked decline in the percentage and actual number of lymphocytes in the peripheral circulation, which not later than two and a quarter hours after transfusion reached figures entirely comparable to those obtained beforehand. The slight changes that occurred in the numbers of the other white cells after injection of the leukemia blood may be observed by inspecting Table 1 and the chart. The recipient's polymorphonuclear neutrophil count could not have been altered more than 300 per cubic millimeter by the addition of such cells from the donor.

The increase in the "large mononuclears" and decrease of the polymorphonuclear neutrophils following radium is to be attributed to the influence of the rays on a patient with lymphosarcoma.

Dr. Charles A. Doan made counts of the living white corpuscles in blood films, supravitally stained with Janus green and neutral red, studied at 38 C., to determine whether any changes in the activity of the corpuscles occurred as the result of the transfusion. His figures for differential counts of living cells during the day of the transfusion are essentially the same as those obtained from the fixed preparations. After the transfusion there was no increase in the number of "nonmotile" cells of the myeloid series nor any evidence of lymphoid degeneration or disintegration. The bulk of the cells showed throughout the day every evidence of normal physiologic activity.

None of the fixed and stained preparations from either donor or patient in the three days following transfusion showed more than a few disintegrated white cells, no more than are to be found in similarly made films of normal blood. This fact and Dr. Doan's study serve to confirm Bunting's and Huston's observation that under the given experimental conditions there is no evidence of destruction of the lymphocytes in the blood stream.

A rapid disappearance of the lymphocytes from the peripheral circulation of man, after the introduction of many, is reasonable to expect, from Bunting's and Huston's observations on rabbits. Sabin, Cunningham and Doan [2] have shown that in normal persons the constant fluctuations during the day in the total number of white cells is paralleled by changes in the number of polymorphonuclear neutrophils, while the number of lymphocytes and "large mononuclears" remains more nearly constant. As shown in the chart, this is what

2. Sabin, F. R.; Cunningham, R. S., and Doan, C. A.: The Normal Rhythm of the White Blood Cells, Bull. Johns Hopkins Hosp., to be published.

occurred in the patient except during the one or two hours directly after the transfusion. During this time the transfused lymphocytes altered the picture, although the absolute number of the other cells remained rather constant. It thus seems probable that the rapid decrease of lymphocytes in the recipient's peripheral blood was particularly dependent on their rapid removal from the circulation.

It is possible, however, that the rapid decrease of the lymphocytes was only partly due to their removal from the circulation. Their rapid decrease may have been partially caused by becoming relatively slowly mixed with all the blood in the body. It is known that considerable areas of "stagnant" blood occur particularly in inert persons. Such areas, physiologically isolated from the active blood stream, are in the liver [3] and the spleen,[4] and the same has been demonstrated for the muscles.[5] The lymphocytes after the transfusion probably became quickly distributed through the actively circulating blood. However, their more gradual mixing with the "stagnant" blood might play some part in causing their relatively rapid decrease per cubic millimeter of peripheral blood.

As Barcroft [4] has shown in rabbits that there is a more rapid mixing of the circulating and the stagnant blood during exercise than at rest, it would be interesting to know whether this patient's lymphocytes would have fallen much more rapidly if she had been exerting herself after the transfusion, instead of lying quietly in bed. The phenomenon of the rapid lymphocyte decrease tempts further speculation and brings up problems that are often conjectured but yet to be solved. The nature of the experiment did not permit determination of whether or not the transfused lymphocytes acted merely as foreign particles which were quickly eliminated, as Drinker and Shaw [6] have shown is the case for manganese dioxid granules. Furthermore, it could not prove whether the lymphocytes were stored or rapidly destroyed in some organ, migrated into the intestinal tract or elsewhere, or what part was played by their complete mixing with all of the patient's blood. It remains a problem what the mechanism may be that determines or regulates the "level" of a person's lymphocyte count and what causes that count, when increased by the injection of lymphocytes, to be rapidly restored to the level set by the body, which, in this case of lymphosarcoma, was below normal.

SUMMARY

1. A patient in an advanced stage of generalized lymphosarcoma, whose white blood cells were 6,400 per cubic millimeter and lymphocytes 15.5 per cent., was transfused with 450 c.c. of blood from a patient with chronic lymphatic leukemia, whose white blood corpuscles numbered 89,000 per cubic millimeter and lymphocytes 95.6 per cent. This transfusion produced no greater benefit than one with normal blood.

2. The transfusion caused the percentage of lymphocytes in the recipient's peripheral blood to be increased immediately about threefold, and their absolute number nearly four times. The number and percentage of lymphocytes dropped almost to their pretransfusion level within thirty-five minutes of the completion of the transfusion, and reached this level within at least two and a quarter hours without a subsequent significant change.

3. There was no evidence that the transfused lymphocytes were destroyed in the peripheral circulation.

TABLE 2.—*Blood of the Donor with Chronic Lymphatic Leukemia*

	Red Blood Cells, Millions per C.Mm.	Hemoglobin, per Cent.	White Blood Cells, Thousands per C.Mm.	Polymorphonuclear Neutrophils, per Cent.	Polymorphonuclear Eosinophils, per Cent.	Polymorphonuclear Basophils, per Cent.	"Large Mononuclears," per Cent.	Large and Atypical Lymphocytes, per Cent.	Small Lymphocytes, per Cent.	Total Lymphocytes, per Cent.	Total Lymphocytes, per C.Mm.
December 16, 8:55 a. m.	4.0	88	80.3	2.9	0	0	0.1	1.5	95.5	97.0	77,900
9:55 a. m.	3.9	89	89.2	3.4	0.1	0.1	0.8	4.3	91.3	95.6	85,200
10:30 to 10:55, 450 c.c. of blood withdrawn											
11:15 a. m.	3.7	—	85.5	1.8	0.2	0	1.0	2.4	94.6	97.0	82,900
3:30 p. m.	—	—	79.0	6.0	0	0	1.0	8.0	85.0	93.0	73,400
December 17, 9:30 a.m.	3.6	91	78.9	7.6	0	0	0.2	6.2	86.0	92.2	72,700

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THE FEMALE SEX HORMONE AND THE GESTATIONAL GLAND *

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In spite of the efforts of many investigators as well as of clinicians to obscure the issue by introducing complexities, the fact remains that the female genital tract still has but one purpose—that of reproduction. To accomplish this vital purpose periodic sex cycles occur, of which the fertile sex cycle, as we shall try to show, and not the infertile, or abortive cycle, is, and should be regarded, as the normal type.

Carlson [1] has outlined these complexities. Our intention is to simplify the situation by reducing the essential facts to be considered to the fewest, and to demonstrate that these essential phenomena can be reproduced by extracts obtained from the ovarian follicle fluid, corpus luteum and placenta. The extracts so far prepared by us contain the female sex hormone in an as yet not fully pure state.

The work here outlined is a preliminary communication which embraces not only the ground covered in former papers published by one of us,[2] but also new and recent investigations performed by both of us, assisted by Messrs. Milton Hartman; Judson Halloway, A.B.; Hugo Kruger, A.B.; Allen Lough, A.B.; Edward Muntwyler, A.B.; Walter Weyerts, A.B., and Julius White at the Chemical Laboratories of the

* From the Research Department, National Jewish Hospital for Consumptives, and the Chemical Laboratories, University of Denver.

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University of Denver, and C. D. Bonham, A.B., at the physiologic laboratory of the University of Colorado Medical School.

PHYSIOLOGY

By R. T. Frank

No attempt will be made to consider the voluminous literature. For it we refer our readers to Carlson,[1] Marshall,[3] and Frank.[2]

Puberty.—Puberty is ushered in by increased ovarian activity (follicle ripening). Why this sudden acceleration of growth impulse takes place is unknown. Yet Long and Evans [4] have shown that immature ovaries of very young rats, when successfully implanted into adult animals, at once mature and functionate. This signifies that before puberty some restraining influence is present, or some essential factor is lacking.

The Fertile Sex Cycle.—The first sex cycle begins when one or more ovarian follicles (depending on the species) begin to mature completely. This maturation is accompanied by associated changes in the uterus, vagina and breasts, which can be described as pregravid in character and purpose.[5] Near the acme of these uterine changes, ovulation takes place and the ovum is fertilized in the tube, carried down into the prepared uterus, and there gains a foothold in the decidually changed uterine mucosa. The continuance of pregnancy is marked by persistence of the corpus luteum and formation of a placenta. Hyperplasia of the breasts and of the entire genital tract continues until the onset of labor. All these phenomena are anabolic. The short puerperium, characterized by its involution of the sexual tract, represents the catabolic phase of the fertile cycle (Fig. 1).

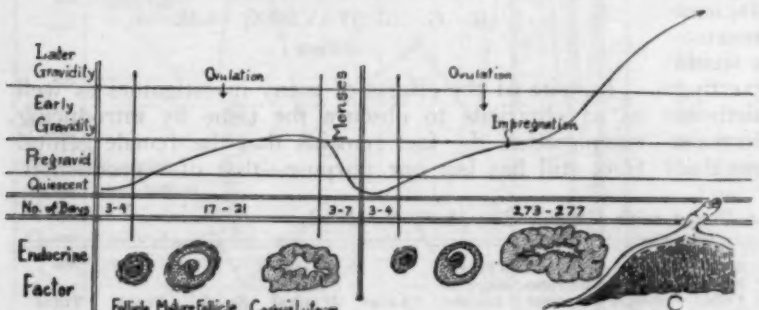

Fig. 1.—Schematic representation of the sex cycle in the human female. If impregnation does not take place, the cycle is abortive, twenty-eight days. If fertilization occurs, the cycle is prolonged over a period of from 273 to 277 days, terminating with the puerperium (fertile).

The Infertile, or Abortive, Sex Cycle.—Perhaps, because of its vastly more frequent occurrence, especially in the best studied species, the human female, attention has been unduly focused on the abortive, or nonfertile, sex cycle. The pregravid changes are identical with those of the fertile cycle; but if the ovum is not impregnated, or if it fails to gain a foothold in the uterine mucosa, the corpus luteum involutes rapidly and with its involution the pregravid changes rapidly regress, proving involutionary in the lower forms but destructive in the primates. In the abortive cycle, the anabolic phase ceases abruptly, shortly after ovulation has taken place, and is followed by the catabolic regression, the two phases being much nearer equal in length than in the fertile cycle (Fig. 1). A shorter or longer period of quiesence may be intercalated between cycles.

In the human female the most fixed and recognizable point in the abortive cycle is menstruation, which marks the beginning of the catabolic phase, and is due to the destruction and expulsion of the decidually changed lining of the uterus. This destruction takes place when impregnation has failed to occur. It corresponds to abortion of the maternal decidua (Fig. 1). Menstruation differs in every essential from the bleeding occurring in female dogs and in cows, which is due to the excessive hyperemia of estrus and takes place before impregnation can occur (i. e., before acceptance of the male).

It is not our purpose to attempt to explain certain phenomena: 1. Among them we mention the spontaneous onset of puberty. 2. For a possible explanation of the periodicity of the sex cycle, the reader may accept Loeb's [6] theory of the inhibiting influence of the corpus luteum on follicle ripening, or the less convincing interpretation offered by Allen,[7] based on Robinson's [8] and his own observations of periodic ovogenesis in the adult ovary. 3. Nor do we know why pregnancy protracts the functional life and activity of the corpus luteum.

We propose to focus our attention on certain effects produced, at will, by means of potent extracts. These consist in:

1. The production of premature puberty.
2. The production of pregravid changes in the uterus, vagina and breasts of (*a*) immature animals and (*b*) castrates.
3. The exaggeration of the pregravid changes to correspond to conditions encountered in early pregnancy.[9]

It is to be emphasized that all these changes can be induced by follicle fluid (or its extracts), corpus luteum and placental extracts, their action being in every way identical.

As follicle fluid, corpus luteum and placenta contain this active principle, which induces hyperemia and hyperplasia of Müller's tract and mammae, often with the associated psychic phenomena of estrus, and as these three, anatomically so different, endocrine glands are continuous in their action, one succeeding to the other (the yellow body continuing the work of the follicle, the placenta gradually replacing the work of the involuting corpus luteum), we propose to emphasize the continuity and interaction of this triad by giving to it a name both descriptive and striking, that of the "gestational gland."

The evidence of the hormonal action of the gestational gland to be submitted consists mainly of researches that I have conducted with the cooperation of various collaborators since 1913 (the late Dr. J. Rosenbloom, Mr. Lee, Dr. Giese, and now Prof. R. G. Gustavson together with the associates named above).

In May, 1917, I injected four virgin immature rabbits repeatedly with follicle fluid derived from the

3. Marshall, F. H. A.: The Physiology of Reproduction, Ed. 2, New York, Longmans, Green & Co., 1922.
4. Long, J. A., and Evans, H. M.: The Oestrous Cycle in the Rat, Mem. Univ. California **6**: 98, 1922.
5. To produce noticeable effects, such as a pregravid reaction, the quantity of follicle fluid elaborated and absorbed must reach a certain volume. Subthreshold reactions sufficient to cause prepuberty growth and development are continuously produced throughout infancy and childhood by the small number of growing follicles, which do not reach maturity.
6. Loeb, Leo: Deutsch. med. Wchnschr. **37**: 17, 1911.
7. Allen, E.: Am. J. Anat. **31**: May, 1923.
8. Robinson, A.: Tr. Roy. Soc. Edinb. **52**, pt. 2, 1918 (cited from Allen).
9. The absence of fetal elements prevents a more complete reproduction of pregnancy changes in the uterus. The rabbit's breasts correspond to those seen at midpregnancy.

ovaries of pregnant and nonpregnant animals. In all four rabbits a rapid hyperplasia of uterus, vagina and breasts developed. This signified (1) premature sex development, as well as (2) a pregravid change.[9] Within two weeks of completing these experiments I was called into active service in the U. S. Army, in which I remained for two years. Thereafter uncontrollable circumstances prevented my resuming research work until 1923. Since this time Gustavson and I have repeated these findings many times on castrated rabbits, as well as on spayed rats.

Fig. 2.—Uterus of castrate immature rabbit (weight at time of experiment, 600 gm.), showing effect of twenty-two injections of the unconcentrated lipoid extract of corpus luteum. Drawn to scale: *A*, portion of right horn of uterus removed as control at time of castration; *B*, uterus, showing hyperplastic effect of injections instead of the to be anticipated castration atrophy; *A'*, cross-section of uterus before injections (immaturity). Low power magnification. *B'*, cross-section of uterus after injections, showing hyperplasia especially of mucosa; same magnification as *A'*. Tracings from photomicrographs.

Allen and Doisy,[10] working on rats, have obtained similar results with follicle fluid as well as with a lipoid extract of this fluid (1923).

Thus, by substitution, puberty, as well as pregravid, changes can be induced in immature and castrated animals with follicle fluid.

The pioneer work of Iscovesco[11] appeared in 1912. Since 1913, I have succeeded in producing the premature sex development as well as the pregravid reaction[2] in the uterus, vagina and breasts of castrated rabbits, guinea-pigs, cats and rats (breast reaction slight in the last). The reaction manifested itself in huge mucosal and muscular hyperplasia of the uterus, characterized by turgidity, edema and mitoses. The reaction was produced by means of the lipoid fraction obtained from the corpus luteum as well as that of the placenta.

Since Allen and Doisy in 1923 introduced the rat vaginal spread reaction of Long and Evans into this type of research, we have repeated our work, employing the rat-spread reaction with success.

The recent categorical denial, by Allen and Doisy, of the potency of all corpus luteum extracts, as well as the well known fact that the literature teems with contradictions regarding the effect of these extracts,[12] and finally because our own results with extracts of the yellow body were not invariably uniform, induced us to try to clear up this question.

The method of procedure employed was simple. In different series, corpora lutea of the hog and cow were separated into batches corresponding to (1) early vascularized (bloody), (2) later vascularized (bloody pink), (3) flourishing (pinkish yellow), and (4) involuting (yellow). Only the completely fibrous bodies were discarded. Care was taken to avoid the possibility of contamination with follicle fluid. Of these groups, only Group 4, the involuting batch, regularly gave a potent alcoholic benzene extract. The irregular and incalculable action of the crude corpus luteum extract therefore depended on the amount of Group 4 present in a given batch of the mixed corpora lutea. Further research, however, then developed that each of the other groups could be made to yield an active extract by concentration, which consists mainly in the elimination of phosphatids, cholesterol and cholesterol esters. The amount of active hormone present at any time proved roughly inversely proportional to the amount of cholesterol found.

The explanation of this seemingly bizarre action is simple. At the time of follicle rupture, a concentrated active extract (the follicle fluid) is poured into the peritoneal cavity and rapidly absorbed by the lymphatics. The granulosa of the follicle at that time has no connection with the blood stream, hence the product is largely stored. But immediately after ovulation, capillaries penetrate the ruptured follicle, and within a few hours the process of vascularization places each secreting cell into intimate contact with one or more capillaries. From that time on the follicle (or, better, its successor, the corpus luteum) is no longer a storage gland, the cell secretion being carried off almost as rapidly as it is formed. When full maturation has been reached or has just passed, the blood channels begin to diminish before the secreting cells lose their activity. Therefore, for a short period, a sudden transitory increase in the stored active substance is noted.

Our technic of testing the potency of extracts has been by three methods.

1. Noting a growth producing action on the uterus, vagina and breasts of immature virgin and castrated rabbits (Fig. 2).

2. Noting the change produced by injection of extracts on the vaginal spreads obtained from spayed rats.[13]

3. Employing a new reaction devised by me and based on the discovery and technic of Blair.[14] This investigator found that the uterus of the white rat, when suspended in a chamber filled with oxygenated Locke's solution, underwent spontaneous rhythmic

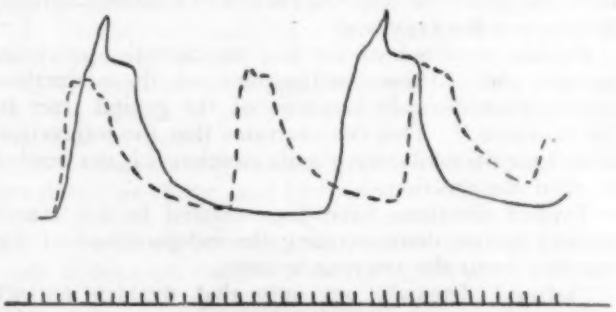

Fig. 3.—Tracing from records of spontaneous contractions of rat's uteri: continuous line, castrate treated with corpus luteum extract; rate from 103 to 105 seconds; broken line, castrate untreated; rate, 53.6 seconds. The rate for normal rats at estrus is from 103 to 108 seconds (duration of one contraction); the rate for normal rats postestrus is from 45 to 55.

contractions, which were slow at estrus and more rapid after estrus.

The experiments performed by Mr. C. D. Bonham (junior student, University of Colorado Medical School, Department of Physiology), who is thoroughly familiar with this type of technic, showed that the uterus of the castrated rat had a rhythm identical with that of early interestrus. However, the uterus of rats whose vaginal smears had become positive by means

10. Allen, Edgar, and Doisy, E. A.: An Ovarian Hormone, J. A. M. A. **81**: 819 (Sept.) 1923.
11. Iscovesco, H.: Compt. rend. Soc. de biol. **73**: 104, 1912.
12. Edmunds, C. W.: The Pharmacology of Ovarian Preparations, J. A. M. A. **83**: 2016 (Dec. 20) 1924.

13. The vaginal spread of the castrated rat consists mainly of leukocytes. When potent extracts are injected, after an interval of between twelve and forty-eight hours, the spread changes to squamous non-nucleated epithelium similar to the spread seen at normal estrus. Intermediate and part reactions may occur, of which notice will be taken in a later communication.
14. Blair, E.: Am. J. Physiol. **65**: 223 (July) 1923.

of injection of corpus luteum or placental extracts produced the slow curve typical of estrus (Fig. 3).

This method, therefore, furnishes us with a third physiologic test for assaying the potency of the sex hormone. The test differs completely from the work of Seckinger,[15] who adds the extracts to be assayed to the Locke's fluid. The resulting reactions on the uterus or tube obtained by Seckinger are purely of pharmacologic nature and of more than doubtful significance.

By all three methods just enumerated, we have been able to show that active extracts can be obtained from follicle fluid, corpus luteum and placenta; also that the action of these extracts is identical.

These observations of ours should definitely settle the long drawn out controversy concerning the effect of corpus luteum extracts. Quite recently, Allen and Doisy (together with Ralls and Johnston[16]) have stated that all corpus luteum extracts are inactive. They have gone further by casting doubt categorically on all previous researches in which authors reported positive results obtained with corpus luteum extracts (Fellner, Hermann, Frankl and Fonda, Frank and Rosenbloom, Frank), and having thus summarily disposed of these reports, which include work on placenta and follicle fluid also, base claims of priority on this unjustified and untenable foundation. We trust that our findings, obtained, among other methods, on spayed albino rats and based on the change in the vaginal spread which Allen and Doisy demand as the sine qua non of any proof, will definitely resolve these doubts and will induce them to modify this assumption of being final arbiters.

The extreme potency of extracts containing the female sex hormone is evidenced by the fact that a typical reaction can be obtained on the atrophic tubular system even after long periods of castration. The most extreme example of our numerous series is the immediate and powerful response elicited in a rabbit castrated sixteen months previously.

Rabbits deprived of thyroid, suprarenals, pancreas, ovaries and various combinations of these ductless glands showed ready response of the genital tract to the hormone.[17] This demonstrates that the interaction of at least the endocrine glands mentioned is not needed to elicit the reaction.

Typical reactions have been elicited in the transplanted uterus, demonstrating the independence of the reaction from the nervous system.

Carlson[1] demands not only that ovarian extract prevent the atrophy of the uterus in spayed females (as we have succeeded in doing) but also that it "initiate and maintain estrual periods typical for the species." The initiation of estrus is easily obtained, as shown in the foregoing; but "maintaining the estrual period typical of the species," which implies automatic periodicity, is impossible, as continued injections merge estrual into pregnancy phenomena.

Our most important conclusions may be thus summarized:

1. Each sex cycle is preparatory to gestation, the normal sex cycle being the fertile one that leads uninterruptedly to parturition and lactation.

2. An abortive cycle occurs when pregnancy fails to develop. Soon after ovulation the anabolic phase ceases, a catabolic period succeeding it.

15. Seckinger, D. L.: Am. J. Physiol. **70**: 538 (Nov.) 1924.
16. Doisy, E. A.; Ralls, J. O.; Allen, E., and Johnston, C. G.: J. Biol. Chem. **61**: 711 (Oct.) 1924.
17. Frank, R. T.: Surg., Gynec. & Obst. **25**: 329 (Sept.) 1917.

In most forms the catabolic period is involutionary. In the primates this period is destructive (menstruation).

3. The endocrine factors producing the cyclic changes are successively supplied by the follicle, corpus luteum and placenta.

4. To emphasize this continuity, we propose the name of the gestational gland for this triad (follicle, corpus luteum and placenta).

5. By substitution (subcutaneous injection) with lipoid extracts of these glands (follicle fluid, corpus luteum, placenta) we have obtained: In female castrates or in immature animals alike: (*a*) premature sex development (pubertas precox); (*b*) hyperplasia of the tubular system and mammae, especially marked in rabbits. In castrates: (*c*) in rats, vaginal spreads characteristic of estrus, together with hyperplasia of the duct system; (*d*) in rats, treated with potent extracts, typical estrual contractions of the uterus suspended in Locke's fluid.

6. The active substance has been sufficiently concentrated to produce physiologic results in a total dosage of 2.25 mg. (0.00225 gm.).

CHEMISTRY

By R. G. Gustavson

The study of the chemistry of the sex hormone is still far from completed. This statement is true for all of the hormones. The question of chemistry resolves itself into two problems: 1. Is the physiologic activity of crude extracts due to specific substances alone, or can these responses be brought about by a variety of substances? 2. What is the chemical nature of these specific substances?

The question of specificity has not been thoroughly investigated, and very conflicting observations are reported by different workers.

Zondek and Robinson[18] have reported growth of the uterus and vagina of guinea-pigs, using the weight proportion between the uterus and body weight as an index, in response to injection of aolan (sterilized milk), histamin, tenosin (a mixture of histamin and tyramin) and epinephrin. If their conclusions were to prove correct, the sex phenomena could be induced by nonspecific factors of the most diverse chemical constitution. Experiments in our laboratories conducted on immature rabbits, hypertrophy and hyperplasia of the uterus being employed as a test, have given uniformly negative tests with these substances. These substances also gave negative tests when injected into spayed rats and the vaginal smears studied.

Schroeder and Goerbig[19] report positive results with liver lipoids. Our work with liver lipoids has given negative results, hypertrophy and hyperplasia of the uterus in young virgin rabbits being used as a test.

Fellner[20] reports that testicular lipoids injected into the female gave changes similar to those following the administration of placental or ovarian lipoids. Our experiments with testicular lipoids have given negative results when injected into spayed rats, and vaginal smear studies made.

Assuming the physiologic response to be due to a specific substance, what are its physical and chemical properties? Iscovesco,[21] the pioneer, showed that the lipoid fraction of the placenta contained the active principle. By tedious and complicated methods, he obtained a crude active extract. Similar results were obtained by others with the lipoids of the corpus luteum, placenta and follicle liquid (Aschner,[21] Hermann,[22]

18. Zondek, B., and Robinson, M. R.: Am. J. Obst. & Gynec. **8**: 83 (July) 1924.
19. Schroeder and Goerbig: Ztschr. f. Geburtsh. u. Gynäk. **83**: 764, 1921.
20. Fellner: Arch. f. d. ges. Physiol. **189**: 199-214, 1921.
21. Aschner: Arch. f. Gynäk. **99**: 534, 1913.
22. Hermann: Verhandl. d. Deutsch. Gesellesch. f. Gynäk., 1913; Monatschr. f. Geburtsh. u. Gynäk., 1915.

Frank and Rosenbloom,[2] Giesy,[23] Frankel and Fonda,[24] and Allen and Doisy[10]).

Our work has confirmed the statement that the active principle is soluble in lipoid solvents. We also find it to be soluble in water in the presence of certain extractives of the placenta. This fact accounts for the contradictions found in the literature with regard to solubility.

The lipins include a very large number of substances: fats, fatty acids, esters (other than fats, such as esters of high molecular weight alcohols of the cholesterol type), phosphatids, lipoproteins, high molecular weight alcohols, aldehyds, ketones. Phosphatids, lipoproteins and their disintegration products are eliminated by the elemental composition of purified extracts that do not contain phosphorus or nitrogen.

Hermann (1913) isolated a pentamin phosphate that would cause enlargement and hyperemia of the uterine horns in animals. In 1915, Hermann reported the isolation of a lipoid from deblooded placenta which is nitrogen and phosphorus free, and which when injected into animals produces an unusual development of the whole genital tract of females. Frankel and Fonda[24] have confirmed this work. The most active extracts obtained by Giesy were free from nitrogen and phosphorus. Our work is in harmony with these findings.

The active substance shows a very high degree of thermostability. All workers are agreed on this property. Hermann,[22] Frankel and Fonda,[24] and Frank and Rosenbloom[2] have attempted purification by distillation under high vacuum at temperatures ranging from 190 to 250 C. without loss of activity. In this respect the active principle differs markedly from vitamins and enzymes.

The active principle can be extracted from alkaline solutions with ether. This eliminates fatty acids. It can also be extracted from acid solutions with ether, which eliminates the presence of basic groups.

Esters seem to be eliminated on the following grounds:

Giesy[23] found that the activity was not destroyed by digestion with soy bean lipase. In our work we have saponified the active lipoid fraction with half normal potassium hydroxid, sodium methylate, sodium ethylate and sodium butylate for as long a period as forty-eight hours without loss of activity. When the saponified mixtures are evaporated to dryness and extracted with ether, we find that these extracts are physiologically active. In other words, it is either a nonsaponifiable material or, if it is an ester, the activity resides in the high molecular weight alcohol liberated by the saponification process. These findings also indicate that the failure to get a physiologic response when extracts are given by mouth is not due to the action of digestive enzymes as is the case with insulin. The failure is probably due to a failure to be absorbed.

Frankel and Fonda, as a result of their work, have concluded that the active principles of the corpus luteum and placenta are identical chemically. These workers report that they have isolated the pure substance. Their produce is a thick, viscous, light yellow oil with turpentine-like odor, insoluble in water, soluble in all lipoid solvents. They ascribe the formula $C_{32}H_{52}O_2$ to the product. One oxygen atom, according to their work, is present as a hydroxyl group (OH) and the other as a carbonyl group (C:O). The compound is unsaturated and contains two double bonds. Several derivatives (esters, phenylhydrazone, oxim and tetrabromid) were obtained, according to these authors, which seem to substantiate their suggested formula. The pure substance shows cholesterol reactions which Frankel and Fonda take to indicate a relationship to cholesterol and bile acids. Frank,[17] in 1917, and Doisy, Ralls, Allen and Johnston,[16] in 1924, found that the active principle can be freed from cholesterol and thus a product is obtained which does not give cholesterol reactions. One of us (R. G. G.) has been able to remove cholesterol quantitatively by a new method, which will be described in the near future. This work all indicates that the substance isolated by Hermann and by Frankel and Fonda was at least contaminated with cholesterol. The derivatives of the "pure substance" obtained by Frankel and Fonda were not reconverted into the original compound to see whether the reisolated substance was active. This crucial test would determine whether the derivatives were from impurities or from the pure substance. Work in our laboratories does not substantiate the statement of Frankel and Fonda that the active principle forms a hydrazone.

We have obtained a phenylhydrazone from the lipoid fraction of the placenta. The mother liquor after removal of the phenylhydrazone and removal of the excess of phenylhydrazin is still active physiologically. This might be due to incomplete precipitation. When the phenylhydrazone, however, is decomposed by being allowed to react with glucose, a lipoid is liberated which is inactive physiologically.

The active principle is an unsaturated body absorbing bromin from carbon tetrachlorid solution. It is oxidized by exposure to air to a more or less resinous mass, which is darker than the original substance. This oxidation is accelerated by light. This oxidized product is found to be physiologically inactive. This indicates that the active principle is an unsaturated body and not merely associated with unsaturated bodies.

From the studies to date the following conclusions may be drawn:

1. The active substance is a thermostable lipoid of high molecular weight.
2. It is soluble in all lipoid solvents; soluble in water in the presence of certain extractives of the placenta; insoluble in water.
3. It contains only carbon, hydrogen and oxygen and possibly just carbon and hydrogen.
4. It is not an ester or a fatty acid.
5. It does not give cholesterol reactions.
6. It does not contain the C:O group.

CONCLUSIONS

The sex hormone is a specific substance elaborated by the gestational gland, taken up by the lymph and blood stream and selectively utilized only by Müller's tract and the mammary glands. The chemistry of the sex hormone is not fully determined.

23. Giesy: Thesis, Columbia University, 1920.
24. Frankel and Fonda: Biochem. Ztschr. **141**: 379, 1923.

Infant Mortality in Germany.—Infant mortality in the German cities continued well below that of 1923, and showed a much smaller summer increase in 1924 than occurred in 1923. In Vienna the infant mortality is very close to the level of the German cities, and has had much the same seasonal fluctuations. For the four weeks ended Nov. 1, 1924, an annual rate of ninety deaths under 1 year of age per thousand living births was reported in the German cities, and eighty-eight deaths in Vienna, as compared with a rate of seventy-two deaths per thousand living births in the 105 large English cities in the same period. Infant mortality in the English cities has been increasing since August, and the October and November rates were slightly higher than at the same date in 1923.—*Pub. Health Rep.* **40**:248 (Feb. 6) 1925.

EXOPHTHALMIC GOITER (GRAVES' SYNDROME) AND INVOLUNTARY NERVOUS SYSTEM

XI. CAUSES OF DEATH, WITH ESPECIAL REFERENCE TO PATHOGENESIS AND TREATMENT BY THYROXIN OF "ACUTE CRISES" *

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AND
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Since 1921, we have studied 130 patients with exophthalmic goiter (Graves' syndrome).[1] Of these, seventeen, or 12 per cent., died, as shown in the accompanying table. Our purpose in this article is to analyze these fatalities, to emphasize the frequent occurrence of the "acute crises," and to describe our experiences with thyroxin administered intravenously in the treatment of these "acute crises."

ANALYSIS OF DEATHS

1. Three patients died of complications unrelated to the original disease. Of these, two died of carcinoma of the stomach, and one of lymphatic leukemia. In the last patient, the symptoms referable to exophthalmic goiter were in abeyance at the height of the leukemia, though leukemia is itself associated with an elevation of the basal metabolism.

2. One patient died of cardiac insufficiency, undoubtedly due to exophthalmic goiter. This woman was moribund when admitted to the hospital, and died thirty-six hours after admission.

Causes of Death in Exophthalmic Goiter

Group 1:		
	Patient I. R.	Cancer of stomach
	Patient M.	Cancer of stomach
	Patient E.	Lymphatic leukemia
Group 2:		
	Patient A.	Cardiac failure
Group 3:		
	Patient M.	Septicemia
Group 4:		
	Patient V.	After operation
	Patient F.	After operation
	Patient T.	After operation
	Patient F.	After operation (ninth day)
	Total operative cases = 43.	
	Deaths = 4.	
	Immediate operative mortality = 9.3 per cent.	
Group 5:		
	Patient K.	Status thymolymphaticus
Group 6:		
	Patient M.	Acute crisis; observed 45 hours; thyroxin 4 hours ante mortem
	Patient R.	Acute crisis; observed 30 hours
	Patient S.	Acute crisis; observed 16 hours
	Patient B.	Acute crisis; observed 10 hours; thyroxin 4 hours ante mortem
	Patient A.	Acute crisis; observed 16 hours; thyroxin 12 hours ante mortem
	Patient S.	Acute crisis; observed 14 days
	Patient K.	Acute crisis; observed 35 days
	Total number of patients = 130.	
	Deaths = 17, or 12 per cent.	

3. One woman died of a generalized infection following a pyelitis. Her basal metabolism had fallen from 37 per cent. to 6 per cent., and she was convalescent so far as exophthalmic goiter was concerned.

4. Four patients died as the direct result of operations on the thyroid gland. Three of these died in our hospital a few hours after thyroidectomy; one died in another institution on the ninth day after operation, from a transfusion reaction. Two of these patients had severe, and two had mild manifestations of exophthalmic goiter. In these the operative risks seemed minimal. None had received iodids. These four deaths occurred in a group of forty-three subtotal thyroidectomies for exophthalmic goiter, an operative mortality of 9.3 per cent.

5. One woman died a so-called thymic death during her convalescence from exophthalmic goiter (Chart 4).

6. Seven patients died of "acute crises" or "storms" of exophthalmic goiter. If the seven deaths in Groups 1, 3 and 5 are omitted, these crises were responsible for 77 per cent. of the deaths in nonoperative cases. The crisis is therefore of the gravest consequence.

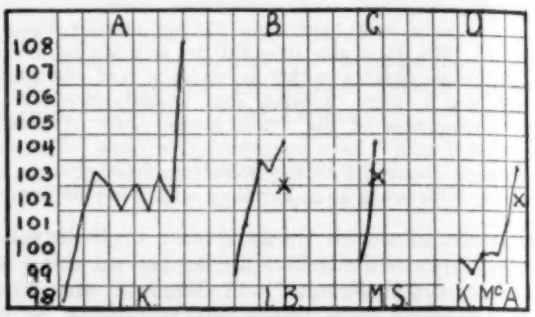

Chart 1.—Temperature in four fatal crises occurring during the course of medical treatment in exophthalmic goiter: *X*, axillary temperatures.

The "Crisis."—This is identical with the reaction so frequently observed following operations on the thyroid gland (Chart 2). It is characterized by an elevation of temperature, a toxic psychosis usually of an agitated maniacal type, an alarming tachycardia (from 160 to 200) often associated with a paroxysmal cardiac irregularity (fibrillation or flutter), a profuse diaphoresis, and a striking loss in weight. It is impossible to estimate the basal metabolism. The blood shows a catabolic accumulation of nitrogenous products, a low sugar content and a variable amount of cholesterin. Sedatives and narcotics are of little value. Hydrotherapy is difficult to employ, and nutrition cannot be maintained.

Pathogenesis of Crises.—The crises are independent of the severity of the disease, and may occur in mild cases. They are independent of the morphology of the thyroid, and may be associated with hyperplastic, colloidal or adenomatous glands. They are apparently independent of the functional activity of the thyroid, and may be seen in true exophthalmic goiter in patients with goiter and no sympathomimetic symptoms, and, finally, we have observed a crisis in a cretin. They are independent of the type of operation on the thyroid, and may follow simple ligation or subtotal thyroidectomy. They are independent of the site of operation, for we have seen crises follow tooth extraction and tonsillectomy in patients with exophthalmic goiter. There is a close resemblance between a crisis and the symptoms in the maniacal type of acute cocain poisoning (sympathomimetic, cerebral and medullary stimulation).

Occurrence in Fatal Cases.—Ten of the seventeen deaths occurred in these crises. Three patients died in crises following operation (Chart 2). Of the seven nonoperative cases, five were brought to the hospital

* From the medical service of the Mount Sinai Hospital.

1. Kessel, Leo; and Hyman, H. T., with the assistance of Lande, Herman: Am. J. M. Sc. **165**: 387 (March) 1923; ibid. **165**: 513 (April) 1923. Kessel, Leo; Lieb, C. C., and Hyman, H. T.: Exophthalmic Goiter and Involuntary Nervous System, J. A. M. A. **79**: 1213 (Oct. 7) 1922. Kessel, Leo; Hyman, H. T., and Lande, Herman: Arch. Int. Med. **31**: 433 (March) 1923. Kessel, Leo; and Hyman, H. T.: Arch. Surg. **8**: 149 (Jan.) 1924.

during the crises and died shortly after admission (Chart 1).

Occurrence in Whole Series.—The vast majority of the forty-three patients subjected to subtotal thyroidectomy developed crises as postoperative complications. With the exceptions noted above (Group 4), all survived these crises, which usually lasted from forty-eight to ninety-six hours. In nonoperative cases, the prognosis is not favorable, unless there is a definite, acute predisposing etiologic factor; i. e., acute infection, psychic trauma. In our experience, in those cases in which there is not present a known predisposing etiologic factor, the outcome has been invariably fatal, with the three exceptions to be noted below. In these three instances, recovery followed the use of thyroxin intravenously.

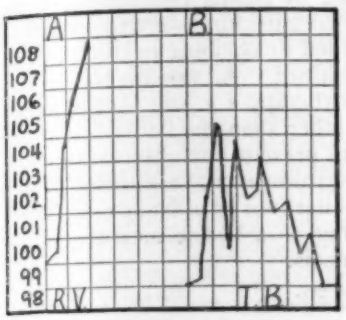

Chart 2.—Temperature in crises following operations on thyroid gland: *A*, fatal case; *B*, recovery.

Use of Thyroxin in Treatment of Acute Crises in Medical Cases.—The use of thyroxin in the treatment of this complication of exophthalmic goiter is not wholly empiric. For reasons mentioned in our earlier papers,[1] we cannot support the hyperthyroid theory for the etiology either of exophthalmic goiter or of these crises. But we do not doubt that the thyroid is involved in a secondary or tertiary manner. In the thyroid, the most constant alteration is the hyperplasia. This hyperplasia is not indicative of the secretory activity of the gland, but is a result of a decrease in the storage of the iodin-containing hormone.[2] No matter what the cause of the decrease in the storage, it is reasonable to assume that the exhibition of thyroxin might be useful in a clinical condition associated with hyperplasia of the thyroid gland. The crisis furnishes an acute, dramatic opportunity to test this deficiency theory. Because this conception is diametrically opposed to the current tenets, we have treated only those patients, who, in the opinion of our colleagues and ourselves, have presented an absolutely fatal prognosis.

REPORT OF CASES

CASE 1.—*History.*—A man, aged 43, was admitted, Feb. 24, 1921. His symptom score, as we estimate it, was 24 (nervousness, ++++; goiter +++; palpitation, +++; rapid heart, +++; bulging eyes, ++; tremor, ++; loss of weight, ++; diarrhea, ++). He had been ill for five months. He was nervous and alert. Vasomotor instability was marked. The tonsils were infected. The pulse rate was 92, and the blood pressure, 118 systolic and 48 diastolic. The greatest transverse diameter of the heart measured 12 cm. The teeth and gums were in poor condition, and he had a fine tremor of the extended fingers. He had all the usual eye signs of exophthalmic goiter, and the thyroid was enlarged and firm, the neck measuring 36 cm. in circumference. The exophthalmometer reading was 21 mm. The laboratory reported a lymphocytosis of 60 per cent. (3,100 per cubic millimeter), a sugar curve of 90, 148, 120, the figures representing the levels at fasting, and one and two hours after the glucose meal, and a basal metabolic rate of plus 54 per cent.

Course.—The patient remained in the hospital for ten weeks, during which time he improved moderately so that, on discharge, he was symptom free, had gained 12 pounds (5.4 kg.), had a pulse rate of 90, a neck circumference of 37 cm., an exophthalmometer reading of 21 mm., and a basal metabolic rate of plus 16 per cent.

June 4, while in the country, he gained another 10 pounds (4.5 kg.) and was advised to resume work. His basal metabolic rate was plus 16 per cent. July 7, he had been at work since the last report. His business was very exacting, and he had been quarreling with his partners. He lost 5 pounds (2.3 kg.), and his basal metabolic rate rose to plus 62 per cent. August 4, he had continued at work and felt much better. The basal metabolic rate fell to 29 per cent. November 20, he felt very well. His pulse rate was 84, and his basal metabolic rate plus 16 per cent. June 1, 1922, he had tonsillitis a month before, and had felt poorly ever since. He lost 14 pounds (6.4 kg.) and his pulse rate rose to 108, and his basal metabolic rate to plus 68 per cent.

Second Admission.—June 8, he was readmitted to the hospital, his condition being almost exactly as it was on the first admission. His weight was 158 pounds (71.7 kg.), his pulse rate 140, and his basal metabolic rate 74 per cent. For the first five days (Chart 3) he was very restless and anxious; he cooperated poorly, but his temperature was normal and he seemed to be no worse than on admission. After the fifth day, his temperature began to rise, and by the eleventh day the temperature range was between 102 and 104.4 F. He was becoming progressively worse. On the tenth day, he had coupled beats, and the cardiogram showed a delayed auriculoventricular time. On the eleventh day, the auricles were in fibrillation, the pulse was weak and rapid, he was restless and clammy, and all consultants agreed that the prognosis was grave. He was then given 5 mg. of thyroxin intravenously. On the thirteenth day, sixty hours after the thyroxin, he was less restless, much brighter, the auricles were regular, and his general condition much improved. He continued to improve progressively, and on the nineteenth day, eight days after thyroxin, the temperature was normal, and he was quite comfortable. Three weeks after this date, he had a tonsillectomy under general anesthesia, and was able to go home, Aug. 8, 1922.

Subsequent Course.—On his return home, he again became worse, and was advised to return to the hospital. He preferred, however, to go elsewhere for treatment, and was admitted to the Presbyterian Hospital. His basal metabolic rate, on admission there, was 83 per cent. He was prepared for operation by roentgen-ray therapy, and had two ligations and a partial thyroidectomy. April 2, 1923, he had a subtotal

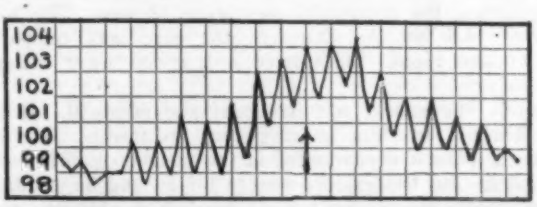

Chart 3.—Temperature of Patient 1, beginning June 15; crisis occurring during medical treatment and without definite acute predisposing cause; arrow indicates injection of thyroxin, 5 mg., intravenously. Latent period should be noted, and curve of lysis compared with Chart 4.

thyroidectomy, and died nine days later during a post-transfusion reaction.

CASE 2.—A girl, aged 26, was admitted to the hospital, Feb. 5, 1922. Her mental condition was such that no history could be obtained until a month later. Then she complained of loss of weight, nervousness (++), palpitation (++), bulging eyes (++), tremor (++), sweating (++), asthenia (++), goiter (++), dyspnea (+) and dysphagia (+), a symptom score of 19. She was delirious; there were periods of mania alternating with periods of coma. She had marked vasomotor instability, infected tonsils and a fine tremor. The pulse rate was 120, and the blood pressure 124 systolic and 58 diastolic. She had moderate exophthalmos, the measurement being 22 mm. There was a healed scar of a

2. Marine, David: Bull. Johns Hopkins Hosp. **21**: 95, 1911. Marine, David; and Lenhart, C. H.: The Pathological Anatomy of the Human Thyroid Gland, Arch. Int. Med. **7**: 506 (April) 1911. Marine, David; and Williams, W. W.: The Relation of Iodin to the Structure of the Thyroid Gland, ibid. **1**: 349 (May) 1908.

previous thyroidectomy. She had been ill for eight years. Four years before she had had a thyroidectomy in Russia, and had been somewhat relieved until six weeks before admission, when she had an exacerbation of all symptoms. For two days before admission, she had been delirious.

Course.—For three weeks (Chart 4) she was delirious. Her temperature, at first low grade, rose gradually to 104 F. At that time, the pulse was rapid and feeble, the respiration shallow and rapid (56 a minute), she was cyanosed, and all consultants regarded her condition as hopeless. All previous therapy with narcotics and hydrotherapy had proved useless. February 2, she was given 5 mg. of thyroxin intravenously. Thirty-six hours later, she was rational, and her condition was markedly improved. Her temperature fell by lysis and was normal on the eighth day after the injection. She gained 7 pounds (3.2 kg.) in the ensuing six weeks, and was discharged to a convalescent home. She had no subjective symptoms at that time; the pulse rate varied between 62 and 84, but the basal metabolic rate continued to be plus 40 per cent.

Subsequent Course.—She had been at the Loeb Home for more than three weeks, and seemed in excellent condition. She had gained 5 pounds (2.3 kg.), and was walking about the grounds, when she suddenly complained of headache, had a convulsion, and died on the way to the hospital. The necropsy diagnosis was status thymolymphaticus. The thyroid remnant was hyperplastic, and the meninges were thickened.

CASE 3.—A man, aged 40, admitted to the hospital, March 11, 1925, complained of precordial pain (+ + + +), dyspnea (+ + +), palpitation (+ +), nervousness (+ +), tremor (+ +), swelling of the feet, loss of weight, asthenia

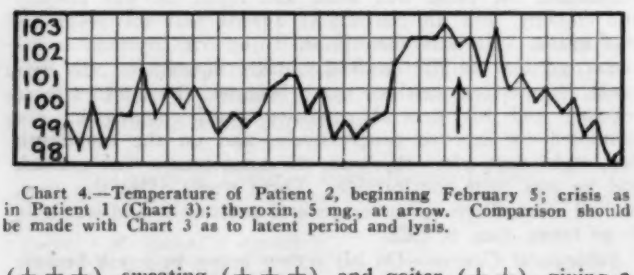

Chart 4.—Temperature of Patient 2, beginning February 5; crisis as in Patient 1 (Chart 3); thyroxin, 5 mg., at arrow. Comparison should be made with Chart 3 as to latent period and lysis.

(+ + +), sweating (+ + +), and goiter (+ +), giving a symptom score of 26. He had been ill for fourteen weeks. He was poorly nourished, dyspneic, orthopneic, cyanosed and very anxious and restless. The tonsils were infected, the teeth and gums in poor condition, and he had a nystagmus in all directions. The thyroid was large and soft, and there were present thrills and bruits over the gland. He had exophthalmos, the protrusion measuring 18 mm. The heart measured 18.5 cm. in diameter; the rate was completely irregular and rapid. Both liver and spleen were enlarged moderately.

Course.—The patient was irrational and maniacal. It was impossible to feed him or carry out treatments. He was digitalized without improvement in the cardiac condition. On the third day his temperature rose to 101 F., and his condition seemed rapidly progressing toward dissolution. He was given 5 mg. of thyroxin intravenously. He seemed improved that night, and gradually cleared up, so that six days later he was bright, cooperating well, and wanted to go home.

Subsequent Course.—He was kept in the hospital until April 23. His basal metabolic rate fell to plus 16 per cent.; he was compensated and symptom free.

COMMENT

In these three patients with exophthalmic goiter there developed, apparently without predisposing cause, an acute "crisis." Such crises in our experience had always terminated fatally. In these three patients, when there was no doubt that the crisis was progressing toward dissolution, thyroxin was administered intravenously. After a latent period of from twelve to sixty hours, these patients began to improve and were practically well on the eighth day following the injection. The period of latency and the prolonged effect of the drug correspond to the time factor observed in all thyroxin effects. Two of the three patients eventually died. Whether the fatal issue might have been prevented by repeated injections of the drug is an open question. In the patient now under observation, we shall seriously consider the regular administration of smaller doses. In three other instances in which thyroxin was used for a similar condition, death occurred before the expiration of the latent period, as shown in the table.

CONCLUSION

Mindful of the danger of basing conclusions on so few observations, of a necessity imperfectly controlled, nevertheless we are inclined to attribute to the thyroxin the beneficial results obtained. At present we do not wish to recommend this therapy for any manifestation of exophthalmic goiter other than the "crisis"; but we feel that it is our duty to present our observations and to suggest the use of thyroxin in the treatment of the crises of exophthalmic goiter, not as a firmly established therapeutic procedure, but as a heroic measure in the presence of a fatal prognosis.

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THE EFFECT OF GERMANIUM DIOXID ON THE RABBIT

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In 1922, germanium dioxid was presented by Hammett, Nowrey and Mueller,[1] Hammett and Nowrey,[2] and Mueller and Iszard,[3] as a relatively nontoxic chemical compound with a marked erythropoietic effect on laboratory animals and of hopeful possibilities as a therapeutic agent in cases of anemia in man. As the fundamental experiments on which these conclusions were based did not appear adequate to justify the conclusions, it seemed advisable to test the drug on an animal more suited to hematologic studies than the white rat, and give more attention to evidences of increased hematopoiesis than had apparently been given by the authors mentioned.

Our experiments were begun in the spring of 1922, but, owing to a variety of circumstances, have extended intermittently over a considerable period of time. In this interval, several reports have been made of the effect of germanium dioxid, not only on laboratory animals but also on man. These reports do not agree as to its value as a hematopoietic stimulant. Among these Kast, Croll and Schmitz,[4] in treating sixteen cases of anemia in man, report that in some germanium dioxid

1. Hammett, F. S.; Nowrey, J. E., Jr., and Mueller, J. H.: The Erythropoietic Action of Germanium Dioxide, J. Exper. Med. **35**: 173 (Feb.) 1922.
2. Hammett, F. S., and Nowrey, J. E., Jr.: The Erythropoietic Action of Germanium Dioxide, II, The Source of the Erythrocythaemia Produced by Germanium Dioxide in the Albino Rat, J. Exper. Med. **35**: 507 (April) 1922.
3. Mueller, J. H., and Iszard, M. S.: The Erythropoietic Action, Cumulative Effect and Elimination of Germanium Dioxide, Am. J. M. Sc. **163**: 364 (March) 1922. Hammett, F. S.; Mueller, J. H., and Nowrey, J. E., Jr.: The Relative Toxicity of Germanium Dioxide and Arsenic for the Albino Rat, J. Pharmacol. & Exper. Therap. **19**: 337 (May) 1922. Nowrey, J. E., Jr.: The Effect of Sodium Germanate upon the Total Hemoglobin of the Albino Rat, Bull. Johns Hopkins Hosp. **33**: 340 (Sept.) 1922. Mueller, J. H., and Iszard, M. S.: The Effect of Germanium Dioxide on the Blood, J. Metabol. Res. **3**: 181 (Jan.) 1923.
4. Kast, L.; Croll, H. M., and Schmitz, H. W.: The Therapeutic Use of Germanium Dioxide in Anemia, J. Lab. & Clin. Med. **7**: 643 (Aug.) 1922.

was found to have a distinct erythropoietic activity. Lenker,[5] also, in treating cases in man, considers that cases of secondary anemia responded well, and that the drug has some value in early cases of pernicious anemia. On the other hand, Minot and Sampson,[6] as a result of administering the drug to animals and to anemic persons, obtained no evidence that the drug had any power to increase blood formation, or to improve the health of anemic persons. Alexander[7] could find no effect in three cases of pernicious anemia. Stengel[8] reports that he was unable to get the slightest result in any of the cases of anemia treated, or in normal persons. Bodansky and Hartman[9] report no hematopoietic effect in dogs, but, on the contrary, a definite glomerular injury in the kidneys of animals treated.

In view of these discrepancies, it has seemed advisable to add such evidence as our experiments afford. The germanium dioxid for our work was obtained, through the kindness of the New Jersey Zinc Company, from Prof. L. M. Dennis of Cornell University. A sterile solution in distilled water of the strength of 0.004 gm. per cubic centimeter was made, and at the time of injection this was united with an equal volume of double normal salt. In the animal tests, the drug was injected subcutaneously into the loose tissue of the axilla. The rabbit was chosen as the experimental animal rather than the rat, which was used by the original investigators, because in the latter animal the withdrawal of the amount of blood necessary for careful counts soon creates an anemic stimulus to the bone marrow, which would tend to cloud the issue. The small amount of blood needed for a single accurate count is so large in proportion to the total blood volume of the rat that nucleated red blood cells may appear in the peripheral blood within the next twenty-four hours (C. H. B.). In the rabbit, on the other hand, no such proportion exists, and this experimental difficulty does not arise.

In the first series of experiments, in the spring of 1922, we began with a dose of 2 mg. per kilogram of body weight, a dose one-half that used by Hammett and his associates in the white rat. The blood of this rabbit, twenty-four hours after injection, had the appearance and the sluggish flow characteristic of animals in which there has been a depletion of fluid. There was also a slight increase in the number of red cells (200,000 per cubic millimeter), but no evidence of change in number of reticulated red cells. This was interpreted as a condensation effect. Our selected animals were then put in metabolism cages, on a relatively dry diet, but with a measured water supply present. Two animals of the series showed a marked increase (from 80 to 100 per cent.) in urinary output in the three or four days following injections of germanium dioxid over that of the three days previous. Six other animals showed no difference in output.

While the results of this series of experiments were negative from the standpoint of hematopoietic stimulus, we felt that the experiments were not above criticism as, during a part of the time, the animals lost weight under the restricted dry diet; yet, even after the diet was liberalized, and the animals got back to their initial weight, continued injections of germanium dioxid led to no different results from the standpoint of the hematopoietic system. There was no constant curve indicating an increased production of red cells, nor was there any increase in reticulated red cells or young forms. In this respect, the animals were a sharp contrast to a female rabbit with a spontaneous anemia after the birth of a litter of young. This was thought to be a good animal on which to test germanium dioxid, but was held for observation before trying the drug, as, with a total count of 3,744,000 red cells, there was 20 per cent. of reticulated reds, as opposed to the normal of about 2 per cent. In two weeks' time, with no drug administration and on the restricted diet, the red count was 6,968,000 cells, and the reticulated forms had fallen to 1.5 per cent. The course of events in this animal is perhaps a comment on the necessity of a bone marrow stimulant after the cause of an anemia has been removed.

Beyond the dietary error in the experiments, another error was made in this and in our subsequent series of experiments, as was found when the tissues of all the animals were studied in histologic section. That error concerns dosage. As we got no effect with 2 mg. per kilogram of body weight, we tried 4 mg. as the dose. With continued negative results, this was increased to 10 and even to 20 mg. This seemed justified, in view of the statement of Mueller and Iszard that they had administered 234.2 mg. to the rabbit without apparent toxic effect.

In the second series of experiments, carried on in the summer of 1923, six selected rabbits were used. Their nutrition was carefully attended to, so that during the eight weeks' experimental treatment they all gained weight. The minimum gain, which was in an animal given one massive dose of germanium dioxid intraperitoneally, was 65 gm. The other animals gained from 250 to 700 gm. They were given seven injections of germanium dioxid at weekly intervals, with the one exception in which Mueller's experiment of one massive dose intraperitoneally was repeated. The total amount of germanium dioxid received in the course of seven weeks was, for the different animals, 28, 70, 102, 140 and 280 mg. per kilogram of body weight. The blood counts were carefully made and checked, and careful counts of reticulated red cells were made. Yet there was no evidence found that the germanium dioxid had exerted any hematopoietic influence.

There was no early change manifested in the leukocytes in total number or in differential formula. However, after from four to six weeks, the animals showed an eosinophilia of rather marked degree for the rabbit, which normally has less than 0.5 per cubic millimeter of these cells in the circulating blood. In one animal, this reached 7 per cent., in another 6.5 per cent., while the lowest was 2 per cent.

This reaction raised the suspicion that the drug must produce some reaction outside of the hematopoietic system, and led to a careful examination of tissues other than the bone marrow and spleen, which had received our attention up to this time. It also led to further injections of the drug to clear up the situation. This study led to the finding that, while a rabbit may survive a single dose of more than 200 mg. of germanium dioxid, administered intraperitoneally, yet the subcutaneous injection of 4 mg. or even 2 mg. per kilogram produces a definite toxic effect on certain tissues of the rabbit. The effect is most marked in the major organs, heart, liver and kidneys, but there are changes in the lymphoid and reticulo-endothelial system and the lungs.

5. Lenker, J. L.: Pernicious and Secondary Anemias Treated with Germanium Dioxide, Pennsylvania M. J. **26**: 86 (Nov.) 1922.
6. Minot, G. R., and Sampson, J. J.: Germanium Dioxide as a Remedy for Anemia, Boston M. & S. J. **189**: 629 (Nov. 1) 1923.
7. Alexander, M. E.: Observation of the Action of Germanium Dioxide in Pernicious Anemia, Am. J. M. Sc. **166**: 256 (Aug.) 1923.
8. Stengel, A.: Some Considerations Regarding Diagnosis and Treatment of Pernicious Anemia, Atlantic M. J. **27**: 779 (Sept.) 1924.
9. Bodansky and Hartman: J. Metabol. Res. **4**: 515, 1923. Bodansky: The Effect of Germanium Dioxide on Red Cell Regeneration in Experimental Anemia, Proc. Soc. Exper. Biol. & Med. **20**: 534, 1923.

Gross lesions are not striking. The heart muscle is usually pale and somewhat opaque. The lungs may be normal, or, in animals after a number of injections, may show areas of moderate atelectasis with adjacent areas of emphysema. The liver is large and the parenchyma is pale; individual lobules are larger than normal. The kidney may show a marked congestion, and some hemorrhages in the boundary zone, with opacity of the parenchyma in this region and of the deeper part of the cortex. The gross picture in the kidney is strikingly like that seen in arsenic intoxication. The spleen is usually enlarged, showing prominent malpighian corpuscles and an increase in pulp. The bone marrow from the center of the femur is definitely fatty, with only a pinkish tinge to its periphery.

Histologically, the lesions are much more striking, varying, of course, with the dosage of germanium dioxid, with the number of injections, and with the length of time the animal was allowed to live after the last dose. In regard to dosage, it may be said that the lesions are present in kind after a single dose of 2 mg.; they are marked after a single dose of 4 mg. per kilogram being present twenty-four hours after the injection, and apparently increasing in intensity up to four days afterward. They are sharply marked in animals killed a week after the last of a series of doses. The lesions are quite like those produced by arsenic; in fact, lesions produced by these doses of germanium dioxid, so far below the maximum tolerated dose (from 1 to 5 per cent.), are comparable in intensity to those produced in rabbits by the fatal dose of arsenic (As_2O_3).

In the heart muscle, the characteristic lesion is a swelling of the muscle cell with the appearance of a serous vacuole at the center, and a gradual disappearance of the inner sarcostyles with an increase of granular eosin-staining material in the serous vacuole. In other words, there is evidently serous imbibition with increasing autolysis of the muscle fiber. In many cases, one finds, in addition, hyaline fibers with pyknotic nuclei or with loss of nucleus—distinct hyaline necrosis. In animals allowed to live three weeks after the last dose, there is confirmatory evidence of the diagnosis of autolysis in the early lesion, in the finding of distinct well marked atrophy of the heart cells. There is further evidence of increased susceptibility of some fibers in interstitial accumulation of mononuclear cells and even of recent fibroblastic proliferation.

The liver lesions are striking. In the acute stages, the lobules are increased in size; the cells throughout the lobule, or in all of it but a narrow peripheral zone, are extremely swollen, so much so that the vessels between appear obliterated. The swollen cells are extremely pale, and the protoplasm appears gathered into scattered granules. In the cells with maximum swelling, there may appear large serous vacuoles, as in the liver of chloroform poisoning. The nuclei may show increase in fluid content, but there is little disturbance in their structure, and in many cells two or three nuclei are found. The sinusoids of the liver appear stripped of Kupffer cells and smaller endothelial cells.

That we have here, as in the heart, serous imbibition with autolysis of cell protoplasm is indicated by the marked atrophy of liver cells, seen in animals allowed to survive the drug injection by three weeks. In these animals there may be also an infiltration of the portal spaces with lymphoid and mononuclear cells, and even evidences of a recent cirrhosis.

In the kidney of the rabbit, germanium dioxid apparently does not injure the glomeruli to the extent that it does in the dog, as reported by Bodansky and Hartman.[1] While albumin is found in the capsular space, and there may be some swelling in the endothelium of the capillary tuft, the main lesions are in the convoluted tubules. The changes are again primarily those of serous imbibition leading to granular disintegration of many cells, with pyknosis of nuclei, and to complete necrosis and desquamation of cells. Desquamated cells, cell fragments and albuminous precipitate are found in the collecting tubules. The bladder urine of all animals examined at the time of the postmortem showed the presence of albumin. The cellular changes are most marked in the tubules close to the glomeruli, and in those of the boundary zone. Some recent scarring is noted in animals surviving the last dose by three weeks.

The lung lesions, especially in rabbits that have had repeated injections, are of interest. In fairly large areas, the lung capillaries and the lung framework show a marked infiltration with large mononuclear phagocytes. These accumulations so thicken the lung framework and reduce alveolar space that adjacent alveoli show a compensating emphysema. Not only are these monocytes present in the lung framework, but also they have invaded the alveolar spaces in considerable numbers. Their source is, perhaps, problematical. The scarcity of Kupffer's cells in the liver leads to the supposition that, with repeated injections, "showers" of these cells have occurred, and they have been filtered out in the lung capillaries. In addition to this finding, there is a marked increase in the lymphoid tissue of the lungs.

The spleen shows, in general, a hyperplasia of the lymphoid tissue, and in most cases a slight increase in hemosiderin in the pulp. Otherwise, there is nothing characteristic.

In no case was there found an extension of bone marrow. The marrow from the middle of the femur was constantly fatty marrow, with a relatively small amount of blood-producing tissue at the periphery as seen normally.

The lesions of the parenchymatous organs are of the type seen in conditions of reduced cellular oxidation. This results, in general, in increased serous imbibition, in increased autolysis and in eventual atrophy, unless necrosis intervenes in the more susceptible organs, as the kidney. While we have not tried the effect of germanium dioxid on the rat, it would seem that if the liver of the rat is affected as is that of the rabbit, a sufficient proportion of the plasma fluid might be withdrawn from the circulation to give the apparent increase in red cells obtained by Hammett and his associates. We have obtained no evidence of hematopoiesis. We further believe that no hematopoiesis can result from the use of the drug in the recommended doses. The injury to the main parenchymatous organs is too marked. Further, while there is no pathologic evidence of the action of the drug on human beings, we doubt the advisability of administering it to human beings, when it is shown to be toxic for another animal in such small doses.

CONCLUSION

We would emphasize that we have not found germanium dioxid to be a hematopoietic stimulus in the rabbit. On the other hand, although a rabbit may survive a large dose of the drug (more than 200 mg. intraperitoneally), yet, in doses as small as 4 mg., the drug is toxic for the main parenchymatous organs, resulting either in the death of cells, or in an eventual atrophy following a state of hydropic degeneration with increased autolysis.

ECHINOCOCCUS CYST OF THE KIDNEY *

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Echinococcus disease limited to a kidney is very rare in this country. Up to and including Kretschmer's [1] case in 1923, there have been eighteen cases reported. These have been reviewed and abstracted by him. In only two of these had pyelograms been done, once by Young,[2] who reported an abnormal pelvis, and once by Kretschmer, who showed a picture of an area of calcification depressing the calices. There is nothing characteristic in pyelography of this condition.

REPORT OF CASE

History.—Mrs. B. N., aged 43, Italian housewife, was admitted to the hospital complaining of a large mass in the left side of the abdomen. The family history was not noteworthy. The patient had come to New York State eleven years before, from Italy, and had lived here since. She had always been strong and well and had never had any operations or previous illnesses. The present illness began two months before she was admitted to the hospital, with pain in the left upper quadrant of the abdomen. This pain was dull in character, as though a heavy weight were pressing against her. There had never been any symptoms referable to the urinary tract, no increase in frequency, and no nocturia, hematuria or dysuria. She said she felt the mass in her left side one month before admission.

Fig. 1.—Kidney opened, showing dozens of daughter cysts, varying in size.

Examination.—The heart and lungs were normal. There was a large, visible mass pushing forward the anterior abdominal wall on the left side from the costal margin to below the level of the umbilicus, so that this was much more prominent than the right. Palpation showed the mass to be firm, tense, smooth, with rounded surface, tender on deep palpation. There was no nodulation, and no definite notch could be made out. The working diagnosis at this time was either an enlarged spleen or left kidney condition. The urine was amber, slightly cloudy, specific gravity 1.022, acid, albumin very faint trace, sugar none, and under the microscope there was a small amount of pus. The red blood corpuscles numbered 3,800,000; the white blood count was 9,300, divided as follows:

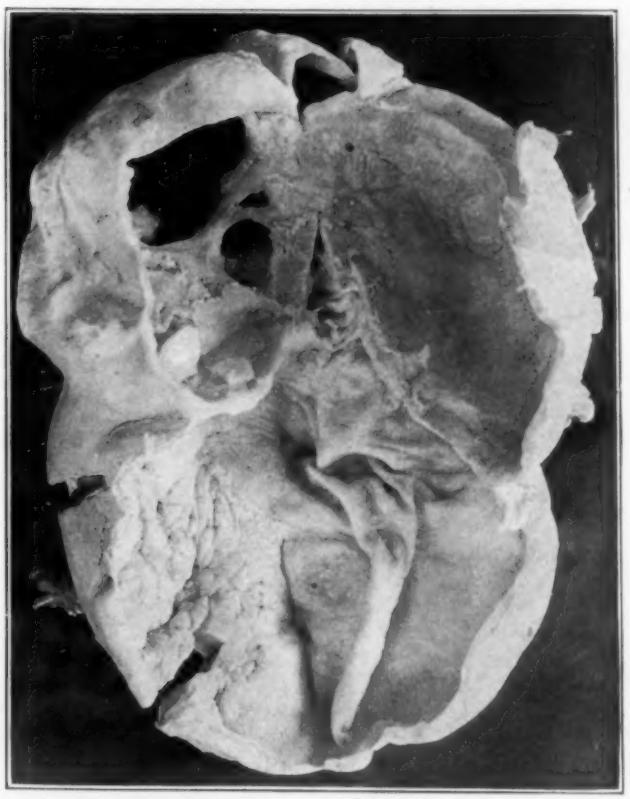


Fig. 2.—The large cysts emptied of their contents, showing the fibrogelatinous outer layer which makes the true cyst-wall; the specimen measured 11 by 6 inches.

polymorphonuclear leukocytes, 70 per cent.; small lymphocytes, 26 per cent.; large lymphocytes, 1 per cent.; basophils, 2 per cent.; eosinophils, 1 per cent. A fragility test was done, and hemolysis was complete at 0.325 per cent. sodium chlorid solution. The nonprotein nitrogen was 36.3 and the sugar, 0.862 mg. per hundred cubic centimeters of blood. The phenolsulphonephthalein test showed, the first hour, 40 per cent.; the second hour, 31 per cent. The Wassermann reaction was negative to both antigens.

Cystoscopy disclosed that the bladder mucous membrane was normal. The right ureteral orifice was normal in location and appearance. The left ureteral orifice was posterior to the normal site, gaping, and golf-hole in type. A size 6 French ureteral catheter passed 30 cm. on the right, and removed clear urine, negative under the microscope. On the left, a catheter passed 40 cm. (this is from 10 to 12 cm. longer than normal) and removed turbid urine, which contained considerable pus. Phenolsulphonephthalein, injected intravenously, appeared in the urine in two minutes from each side; collected for fifteen minutes, it yielded 14 per cent. from the right, and 1 per cent. from the left.

A pyelogram was carried out on the left side; 97 c.c. of sodium bromid 25 per cent. solution was injected slowly before pain was elicited. The roentgenogram showed that a large amount of the solution had refluxed along the side of the catheter back into the bladder. It also showed why the left catheter could be passed for such a great distance, as the ureter was widely dislocated laterally where it was attached to the tumor, so as to form an acute angle, almost doubling back on itself to follow the general configuration of the kidney

* From the Ward Service of the Rochester General Hospital.

1. Kretschmer, H. L.: Echinococcus Disease of the Kidney, Surg., Gynec. & Obst. **36**: 196 (Feb.) 1923.
2. Young, E. L.: Modern Urology **2**.

mass. The pelvis of the kidney was elongated and widely dilated, with an asymmetrical, irregular outline, so that the individual calices could not be demonstrated. A roentgenogram of the chest showed no metastases in the lungs. The diagnosis was tumor of the left kidney, with moderate hydronephrosis.

Operation and Result.—An Albarran incision was made on the left side. A huge tumor mass of the kidney presented, and appeared to be cystic. The lower pole was delivered first. It was a single cyst about the size of a large grapefruit. In order to deliver the rest of the kidney, this cyst had to be aspirated. About 12 ounces (350 c.c.) of clear fluid, with nonurinous odor, was removed, and the cyst wall collapsed. This portion of the cyst was snugly adherent to the peritoneum, which was accidentally opened for about 2 inches, and immediately closed with continuous catgut. The upper pole of the kidney was then freed and delivered. It was also cystic, as

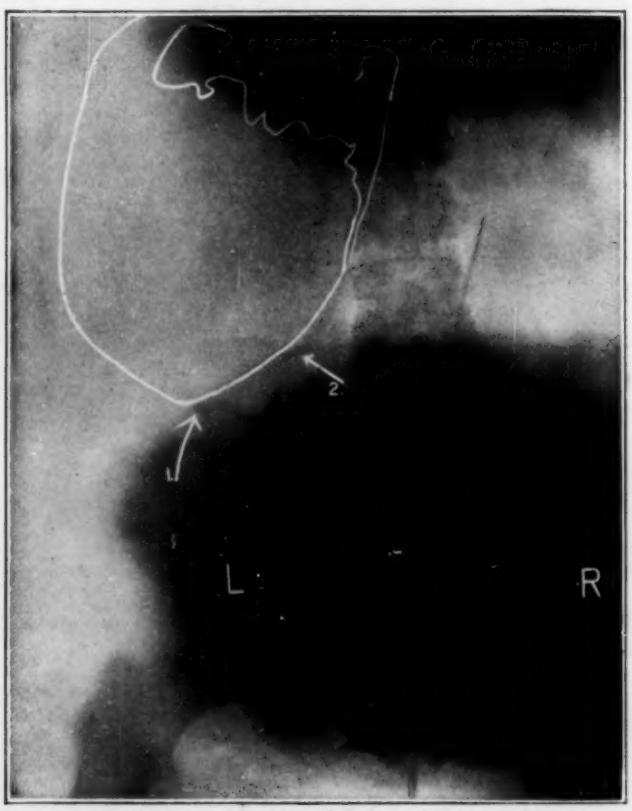


Fig. 3.—Left pyelogram of echinococcus cyst of kidney (retouched for purposes of reproduction): Arrow 1 points to acute angulation of ureter where it doubles back on itself, attached to the under-surface of the kidney mass; Arrow 2 points to midportion of ureter; pelvis greatly enlarged, irregular and asymmetrical; calices obliterated and irregular.

large as the lower pole. The pedicle was clamped and tied, and the kidney removed. A cigaret drain was placed deep and the incision closed in layers.

The removed kidney consisted of two large cysts filled with dozens of daughter cysts varying in size from a pea to a tangerine. The larger mother cysts were lined with a thick, white, transparent, gelatinous layer, easily separated from the fibrous wall of the cyst. There was no renal tissue remaining.

The patient did very well except for the development of a fecal fistula in the lower angle of the wound. This was due to a stitch having accidently been passed through the wall of the descending colon during the repair of the peritoneal rent at the operation. This fistula was closed at a second operation by Dr. McGill. The patient made a complete recovery and was discharged from the hospital, cured.

MODE OF INFECTION

The adult *Taenia echinococcus* is a small tapeworm, less than one-half inch in length, which inhabits the intestinal canal of dogs. This stage is not found in man. The adult worm consists of four segments, the posterior one being larger than the rest of the body and containing the genital organs. When mature, the last segment becomes filled with ova, which are discharged and find their way into the human stomach by means of water or uncooked vegetables, such as watercress, celery or lettuce, which have been contaminated by dogs' excreta.

The process of digestion in the human stomach sets the embryo free, and by means of a crown of little hooks which it possesses, as well as four suckers, it is enabled to bore its way through the wall of the stomach, and thence travels by the blood vessels to the liver, kidney or some other part of the body. As a result of the irritation caused by its presence, a sac or cyst is formed. This is the stage found in man.

From the innermost layer of the cyst there may develop solitary *Taenia* heads or scolices also provided with four suckers and a circle of hooks, while sometimes groups of them, known as brood capsules, may arise in the same way. Daughter cysts are occasionally formed from the scolices, and they in their turn may pass through the same changes, although as a rule they are barren. Occasionally even the main cyst may be sterile, and in such cases the walls become very definitely fibrosed.

Single or multiple hydatid cysts may occur in any part of the abdominal cavity, most frequently in the liver, spleen, omentum, mesentery or peritoneum. The cyst grows slowly and is spherical, except so far as it is molded by the pressure of adjacent structures. It contains a clear saline fluid in which may be found hooklets and daughter cysts completely detached from the walls of the parent cysts. The single hydatid cyst gives little rise to pain or complaint until it becomes large enough to cause mechanical obstruction and pressure symptoms. It then produces a bulging of the overlying abdominal wall, smooth, rounded, more or less tense, and dull on percussion. The disease is rare, except in countries such as Iceland, Australia or Italy, where the inhabitants live in close company with dogs that are the hosts of *Taenia echinococcus*. In these countries, where the disease is fairly common, the kidney is found involved in from only 1 to 3 per cent. of all cases.

Eosinophilia may be found, and when the cysts are living and active, the patient's blood serum may give a specific hydatid precipitin reaction, though the absence of both this and eosinophilia does not exclude hydatid disease. Exploratory laparotomy may be necessary before the diagnosis can be established.

At any time the cyst may rupture either spontaneously or as the result of some injury; if into a serous cavity, such as the peritoneal or pleural, the cavity becomes infected and an abundant development of cysts occurs, giving rise to a local inflammatory reaction. The escape of cyst fluid may cause serious toxemia. Occasionally the organism dies, and then the cyst shrivels up and becomes a firm, leathery mass, sometimes infiltrated with lime salts.

DIAGNOSIS

Of the seventeen cases occurring in this country, a correct diagnosis was made before operation in only four, by the history of the patient voiding small cysts. Of the remaining cases, in six the diagnosis was tumor of the kidney, the true nature of which was revealed at operation. In two, the enlargement of the kidney

was discovered by palpation during a laparotomy for some abdominal condition and later verified by a kidney operation. In five cases the diagnosis was established at necropsy, no operation having been performed.

Correct diagnosis would be made more often if we kept in mind the possibility of parasitic disease. The patient's urine would then be carefully studied for hooklets or tiny daughter cysts. These occur in the urine when one of the larger cysts ruptures, discharging its contents into the pelvis of the kidney.

SUMMARY

1. Echinococcus cyst of the kidney occurs in from 1 to 3 per cent. of all cases of hydatid disease.

2. The diagnosis would be made more often if we kept in mind the possibility of this condition, and searched the urine carefully for hooklets.

35 Chestnut Street.

THE CEREBRAL VASCULATURE

PRELIMINARY REPORT OF STUDY BY MEANS OF ROENTGEN RAY *

TEMPLE FAY, M.D.

PHILADELPHIA

The problem, which has consumed more than a year and a half in making preparations and studies, was undertaken at first with the hope of obtaining injections

Fig. 1.—Injection of middle cerebral artery with mercury after ligation of the circle of Willis; cortical anastomosis between the anterior and middle cerebral arteries.

of individual arteries of the brain with an opaque substance that would show by means of the roentgen ray. Stereoscopic pictures thus taken could be studied, and the exact distribution of each cerebral artery traced throughout its entirety. It was soon found, however, that the Cohnheim theory of end arteries did not apply, at least to the cortex, to any marked degree. Though the original objective was not realized, the results of these studies have brought out other factors, which may be of interest and invite speculation.

This paper will deal only, however, with four considerations:

1. The degree and extent of end arteries in the brain.
2. The degree and anastomosis existing between the larger groups of vessels.
3. The relative vascularity in various portions of the brain.
4. The structural differences between the anterior cerebral arteries and the other cerebral arteries.

* Read before the Philadelphia Neurological Society, March 27, 1925.
* From the Laboratory of Dr. Spiller, Department of Neurology, University of Pennsylvania.

TECHNIC

Fifteen brains in all were prepared and studied in this series. Five were injected after removal with metallic mercury. Ten were injected in situ with barium sulphate, and later removed for study.

Fig. 2.—Injection of the middle cerebral artery on the right and the posterior cerebral on the left after six minutes; advance of mercury to frontal lobes and beginning injection of branches of anterior cerebral artery on the opposite side; small, free collections of mercury are seen as globules that have escaped from fine arterioles damaged in the removal of the brain before injection.

Of the five brains injected with metallic mercury, 200 mm. of pressure was used and the artery injected by means of a small glass cannula inserted within the lumen, and securely tied. The cannula was connected with a glass buret where the pressure could be regulated. After injection was completed, the arterial

Fig. 3.—Complete injection of brain after fifteen minutes (with the cannula in the middle cerebral artery on the right side) under 200 mm. of mercury pressure; large collection of mercury in rolandic area because of the rupture of a small vessel beneath the dura in preparation.

stump was tied and the brain fixed in 10 per cent. dilution of solution of formaldehyd, U. S. P., for two weeks. Stereoscopic roentgenograms were then made in the lateral and vertical positions.

The ten remaining preparations were injected through the femoral artery with barium sulphate, 8 ounces, to

48 ounces of a starch solution treated with formaldehyd, and the brains were removed after two weeks for stereoscopic study.

RESULTS

From the first it was found impossible to confine the mercury to any one arterial distribution unless the injection was allowed to continue for only one or two minutes, before the finer twigs had time to be filled out (Figs. 1 and 2). If the pressure was maintained long enough to allow the capillaries to become injected, the large vessels of all the remaining cortical cerebral arteries showed the presence of mercury. This is best represented by the results noted in Brain 3, which is typical of the rest.

Brain 3 was removed in its entirety, including the dura, which remained intact except at the base, where it was dissected free from the attachments to the skull. Injection under 200 mm. pressure of mercury was made into the right middle cerebral artery only. The branches forming the circle of Willis were carefully tied. Gradual injection caused rapid filling of the right middle cerebral and its branches. Within six minutes, there appeared an injection of the anterior cerebral cortex on the right and a few minutes later also on the left. Though the precaution of tying the anterior communicating artery had been observed, in ten minutes the circle of Willis and basilar arteries showed evidence of the injection as the mercury reached to these vessels. Within fifteen minutes, the entire brain, at least as far as the cortex was concerned, appeared to be completely injected, including the cerebellar arteries. All of this must have occurred through and by means of anastomoses with the middle cerebral artery on the right side (Figs. 3 and 4).

Stereoscopic studies showed several well defined anastomotic arterial trunks which could be traced by means of the stereoscope as directly connecting the

Fig. 4.—Brain completely injected, seen from below; the complexity of the frontal circulation, with the presence of many loops, may be noted.

anterior, middle and posterior cerebral arteries. Many fine anastomotic connections existed.

There was evidence in many of the fine capillaries of definite end arteries on the cortex. It was striking to note that no evidence of anastomosis seemed to exist between the larger vessels supplying the subcortical ganglions or even discernible among the finer vessels in these preparations.

There appears in these preparations a more or less uniform comparatively avascular zone extending from the frontal lobe about 2.5 cm. lateral to the midline on

Fig. 5.—Barium sulphate injection of vessels of brain.

each side and running posteriorly into the parietal lobe. An area similar to that shown in Figure 7 given by the stereoscopic plates is devoid of larger arterial branches below the cortex throughout this zone.

Close study of the general plan of the three main arterial systems of the cortex seems to show a similarity between the posterior and middle cerebral arteries in their tendencies to send out branches directly toward their termination on the cortex. The anterior cerebral artery, however, is quite distinct in its type of distribution. Arterial loops are sent down perpendicularly from the cortex, and radiate like the spokes of a wheel (with the hub situated at the anterior horn of the lateral ventricle). These arterial loops resemble swings in their appearance, and are diagrammatically shown in Figure 6 dipping down from the cortex in long loops.

COMMENT [1]

The significance of the findings in this small series of cases invites some clinical application, though it

1. Duret (Movement médical, Jan. 18, Jan. 25, Feb. 1, Nov. 8, Nov. 15, 1873; Arch. phyiol., 1874, p. 316) and Heubner (Centralbl., Leipzig, 1874, p. 188) in 1874 presented simultaneously work on cerebral injections by means of colored fluids. A discussion arose as to the priority of the work, which Charcot (Studies on the Localization of Cerebral and Spinal Disease 4: 65) points out belongs to Duret. A difference of opinion arose as to the presence of anastomoses over the cortex. Duret's work seemed to point to the existence of only end arteries, except for a few connections with the dural sinuses. Heubner asserted that arterial branches of recognizable size existed between the three main arterial fields on the cortex. Duret's work seemed to bear out Cohnheim's (Untersuchungen über die embolischen Processe, Berlin, 1872, p. 72) theory and was accepted by Charcot as being evidence of the existence of only end arteries in the brain. Beevor (Brain, 1907, p. 403) presented a beautiful study by means of colored gelatin solutions of the various arterial supplies to the brain. He injected the vessels simultaneously, and found a wider range of supply than was previously thought to exist. The use of a more penetrating substance, such as mercury, from a single field, however, and study by the roentgen-ray stereoscope, would bring out anastomotic branches which otherwise might not be shown when simultaneous injection of the larger cerebral vessels under equal pressure in the adjoining fields was undertaken.

must be borne in mind that the methods employed are not comparable with conditions in the circulation under normal circumstances. In the first place, the pressure of 200 mm. of mercury was as high as could be regarded as safe from the standpoint of arterial strength. Another factor was the injecting of a substance unlike blood in many characteristics and introducing this from a positive zone of pressure into one where no pressure resistance was encountered. This of itself might tend to force mercury into other areas, and by dilating vessels give channels that would normally be closed to anastomotic circulation. The age and vascular conditions of the material were not determinable, as many were unclaimed bodies without previous clinical records. All these factors should be considered in the proper placing of value on the extent of available anastomotic vessels on the cortex to care for thrombotic conditions that arise clinically.

The studies seem to indicate, however, that communications are numerous between the various zones of vascular supply, and that these communications are of considerable, size available for collateral circulation. In cases of thrombosis of one of the cortical cerebral trunks, lowering the head, raising arterial pressure with the application of heat to the overlying scalp, may offer some added chance of improvement or recovery if the patient is seen early, and if the thrombosing process has not involved the anastomotic branches.

Some degree of anastomosis has been evident clinically, frequently seen in the recovery of temporary loss of function, and has usually been explained on the reestablishment of the arterial supply through the thrombosed vessel.

I feel, however, that this may be due to a wider compensatory anastomosis than has been hitherto

Fig. 6.—Diagrammatic representation of the comparatively avascular zone devoid of larger vessels in the deeper structures below the cortex, offering a less vascular approach if transcortical exploration is necessary.

considered and if brain tissue can be carried over the immediate period of ischemia due to thrombosis; by favoring anastomotic circulation, some added improvement in these cases might be expected.

The extent of end arteries in the brain as shown by these injections varies in different preparations. A wide range of factors may influence these findings, such as degenerative changes in the vessels themselves, postmortem clotting, and uneven injection by the opaque fluid. It seems evident, however, that the subcortical regions are supplied by end arteries. With few exceptions only, anastomotic branches can be traced in the stereoscope; these are not constant in each specimen. A more intensive study of these branches is now being undertaken.

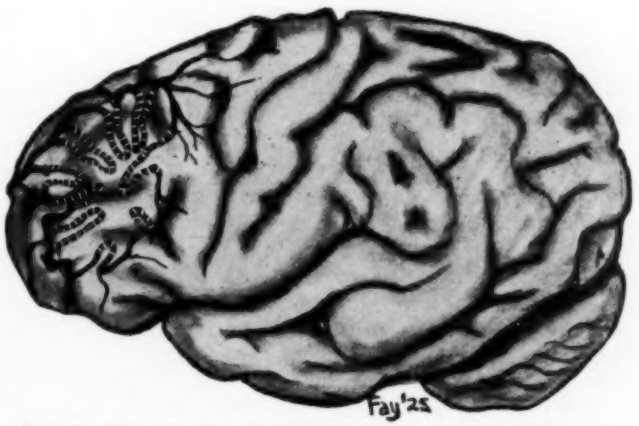


Fig. 7.—Diagrammatic representation of anterior cerebral arteries, showing tendency to formation of loops peculiar to this distribution.

Cortical end arteries do exist to a large extent and particularly in the fields of each arterial supply, the points of fusion between the three main systems being characterized by anastomotic branches.

A consideration perhaps of some surgical value is the presence of a *relatively avascular zone* as regards the vessels of larger size in a definite area extending from the frontal lobe and reaching posteriorly to the parietal region, diagrammatically represented in Figure 6. Here it is of interest to note that, should a transcortical approach to the deep structures of the brain or the ventricles be required, there is relatively no danger of encountering large vessels, which might cause awkward bleeding or impair a definite area from circulation by ligation or rupture. After hemostasis of the presenting vessels on the cortex, the field would be relatively avascular. The ventricles undoubtedly affect the type of distribution in this zone and favor the cortical course of the larger vessels.

It seemed, on study of the three large arterial supplies to the cortex, that the frontal lobe supplied by the anterior cerebral differed considerably from the remaining two arterial distributions. This was most marked in the appearance of large, swinglike loops dropping down from the cortex, probably following the convolutions and radiating toward a center near the anterior horn of the lateral ventricle. The circuitous course taken by the anterior cerebral artery to reach its areas of distribution differs in that seen from the middle and posterior cerebral arteries, which show few loops of this character and tend to run more directly to their source of distribution on the cortex.

Perhaps the inference could be drawn that the frontal lobe has developed more recently than the phylogenetic plan of the arterial system produced for its supply, and consequently the more recent demands on this vessel have given rise to the complexities throughout its distribution.

The preparations offer many more detailed studies confined to individual areas of the brain in regard to

its vascular supply. The foregoing studies are preliminary to a more intensive scrutiny of the individual areas of the brain. A further report of the subcortical distribution will be made at some future date.

1924 Pine Street.

BLOOD PRESSURE CHANGES ACCOMPANYING CORONARY OCCLUSION*

LESLIE T. GAGER, M.D.
NEW YORK

In those patients, early described by Herrick,[1] who survive the occurrence of coronary thrombosis, a sudden fall of blood pressure is an event both of physiologic interest and of diagnostic significance. Besides the characteristic pain, and the pathognomonic but frequently undetected pericardial friction rub, the importance of a rapid fall in arterial tension was appreciated by Sir Clifford Allbutt,[2] in differentiating thrombosis from ordinary angina pectoris. More recently, the studies of Gorham[3] and of Gordinier[4] illustrate these blood pressure variations, and give them emphasis.

If we accept, from a physiologic point of view,[5] the division of hypotension into two groups, one an essential type consequent to cachexia or to habitus or constitution, and the second a functional type, due to transient factors, it will be found that for the latter there are relatively few causes. In the absence of hemorrhage, shock, infectious disease and excessive toxic or metabolic disturbance, such as diabetic coma, and with the presence or history of severe pain of cardiac origin or distribution, the fall in arterial tension will commonly be due to acute myocardial insufficiency on the basis of coronary occlusion. I hope to demonstrate this point in the cases that follow, and to show the value of a series of blood pressure readings, when coronary thrombosis is in question.

REPORT OF CASES

CASE 1.—*History.*—J. R., a man, aged 56, French, a bookkeeper, seen, Nov. 9, 1924, complained of pain beneath the upper sternum which ran down both arms. Since a heavy cold in 1914, the patient had been breathless on exertion, and with lessened exercise had gained weight steadily. In the last few months, he had felt at times a sense of oppression in the chest, relieved by rest. The present severe attack came on at home while at rest.

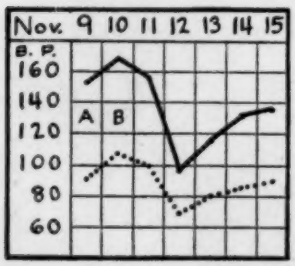


Fig. 1 (Case 1).—Blood pressure readings following attacks of anginal pain: *A*, mild attack; *B*, severe attack.

Physical Examination.—The patient weighed 182 pounds (82.6 kg.) and was 5 feet 4 inches (162.6 cm.) tall, lying without dyspnea or cyanosis. There was slight pallor. Cardiac dulness extended 3 cm. to the right and 10 cm. to the left. The heart rate was 72, the rhythm regular, and the blood pressure 156 systolic and 92 diastolic. The heart sounds were somewhat muffled, but the lungs were moderately emphysematous. Peripheral and retinal arteries showed moderate sclerosis. The urine was found to cause heavy reduction of Benedict's solution, and the initial blood sugar was 0.328 per cent.

Treatment and Course.—Restricted diet and the temporary use of insulin promptly banished glycosuria. With rest, nitroglycerin and codein, the pain, November 9, was controlled, and angina pectoris, on the basis of coronary sclerosis, seemed the probable diagnosis.

Contrary to advice, the patient went to work the following day, and there ensued a second attack of substernal pain, which lasted thirteen hours, and was not relieved by nitroglycerin. The blood pressure, November 10, was 166 systolic and 108 diastolic; the pulse rate, 84. November 11, there was no further pain, the tension was 158 systolic and 100 diastolic, and the pulse rate 96. The patient was in bed.

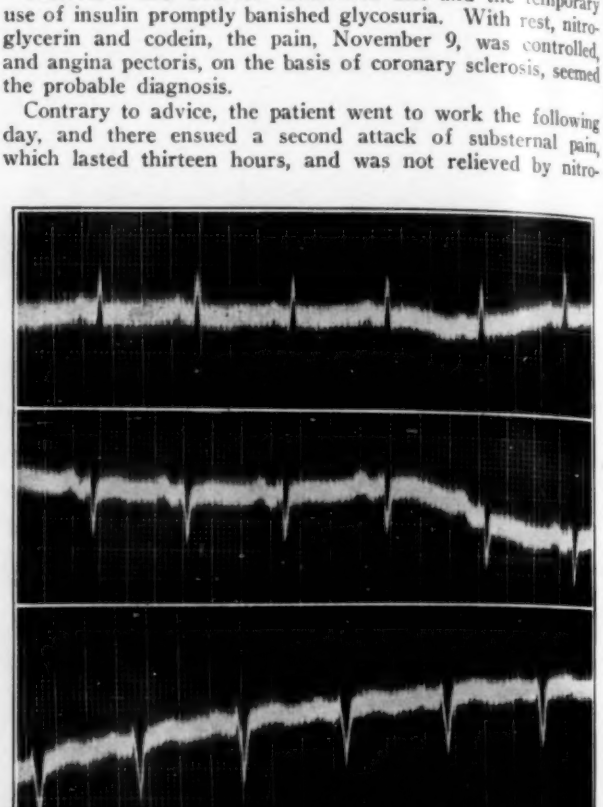


Fig. 2 (Case 1).—Small T waves, with inversion in Lead I as evidence of myocardial disease.

November 12, the man was found sitting up, rather weak but comfortable, and not dyspneic, and the blood pressure was 98 systolic and 78 diastolic; the pulse rate 78, and the rhythm regular. The area of cardiac dulness remained unchanged, and no friction rub was made out at any time. The lungs were clear. The temperature, which had been normal, rose on this day to 100 F.

The general condition of the patient was good, but he was kept at absolute rest. No digitalis was given. November 13, arterial tension had risen to 118 systolic and 80 diastolic, and the pulse rate was 100; November 14, to 130 systolic and 84 diastolic; pulse rate, 86; and November 15, to 138 systolic and 88 diastolic; pulse rate, 84.

The subsequent course has been uneventful. The patient has returned to work and has remained well except for occasional feelings of oppression on exertion. Weighing 170 pounds (77 kg.), he is sugar free on a diet of 2,000 calories.

An electrocardiogram, November 28, showed abnormal inversion of the T wave in Lead I, while the small size of the T waves in all leads suggested myocardial disease. Rare premature ventricular beats were present.

CASE 2.—*History.*—W. H., a man, aged 44, American, a motorman, was referred to the cardiac clinic of the New York Hospital, Oct. 16, 1924, because of shortness of breath. He had presented himself at the asthma clinic with the history of bronchial asthma since the age of 26, but the various series of tests had shown no specific sensitivity. The lungs were

* From the Cardiac Clinic, New York Hospital.

1. Herrick, J. B.: Clinical Features of Sudden Obstruction of the Coronary Arteries, J. A. M. A. **59**: 2015 (Dec. 7) 1912.
2. Allbutt, Clifford: Diseases of the Arteries, Including Angina Pectoris, London, the Macmillan Company **2**: 452, 1915.
3. Gorham, L. W.: Albany M. Ann. **41**: 109 (April) 1920.
4. Gordinier, H. C.: Am. J. M. Sc. **168**: 181 (Aug.) 1924.
5. Wiggers, C. J.: Circulation in Health and Disease, Ed. 2, Philadelphia, Lea and Febiger, 1923, p. 363.

found clear, the heart enlarged, and the blood pressure 125 systolic and 80 diastolic.

Investigation of the cardiac symptoms revealed the history of the sudden, sharp onset, nine months previously, "of a terrible pain, like some one pulling the chest apart," under the upper sternum, radiating into both arms. This lasted thirty-six hours. The family physician found "congestion of the lungs" and the blood pressure, of which the systolic level had previously varied between 170 and 240 mm., fallen to 110.

Physical Examination.—There was moderate increase in cardiac dulness (4 cm. to the right and 10 cm. to the left) with muffled and indistinct heart sounds, pressure 142 systolic and 106 diastolic; pulse rate, 72. The response to exercise was poor, and the patient said that digitalis "was all that kept him going."

The electrocardiogram, October 20, gave evidence of disease of the ventricular muscle as revealed in slurring and notching of the Q-R-S group and an abnormal inversion of the T wave in Lead II.

CASE 3.—*History.*—D. M., a man, aged 50, American, a lawyer, seen, Sept. 27, 1924, complained chiefly of oppression beneath the upper sternum, radiating at times across the chest and into both arms. The past history disclosed freedom from infectious diseases, and a moderately active athletic life until the early twenties, when his habits became sedentary. At 35, an insurance examination disclosed a heart murmur, but no symptoms of disease occurred until the age of 46, when oppression in the chest was felt during tennis. His blood pressure at this time was at the level of 150 mm.

In August, 1924, the present illness began, with the recurrence of this substernal heaviness, while sailing a boat in a heavy wind. A few hours later, while at rest, a most severe attack of pain came on and radiated from the upper chest into both arms. The physician found him in collapse, with the systolic pressure at 90 mm. After four weeks in bed, during which there were several mild attacks, the man was able to walk aboard the boat on returning to the city. Digitalis had noticeably increased his strength.

Physical Examination.—The patient was flabby, overweight and rather pale. The heart was enlarged (4 by 14 cm.), with a diffuse wavy apex impulse, muffled heart sounds, and a

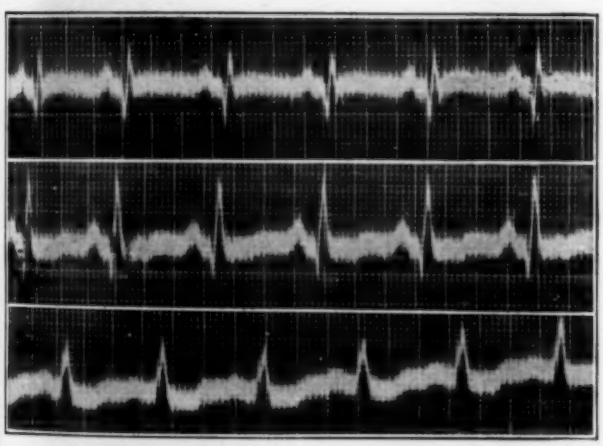


Fig. 3 (Case 2).—Slurring of Q-R-S group in Lead II and notching in Lead III, with inverted T in second lead.

blowing systolic apical murmur. A reduplication of the second sound at the apex produced, at times, a protodiastolic gallop. The pulse rate was 90, regular in rhythm, and the blood pressure was 104 systolic and 68 diastolic. The peripheral arteries were barely felt, but the retinal vessels showed definite sclerosis. The lungs were clear, the liver was not enlarged, and there was no edema.

The diagnosis was coronary artery disease, with occlusion, an infarction and dilatation of the left ventricle.

Treatment and Course.—Digitalis, in full doses, was helpful, and, after a very cautious increase of physical exertion, he was able to return to work. His blood pressure had risen to 135 mm. early in December, when an electrocardiogram revealed the T wave and upwardly convex S-T interval characteristic of coronary occlusion.[6]

CASE 4.—*History.*—A man, aged 55, Irish, a night watchman, admitted to the first medical division of the New York Hospital, Dec. 20, 1920, complained of pain around the heart, fainting and dizziness. The past history gave no indication of circulatory disease; there had been no rheumatic or venereal infection, and an occasional epigastric distress had promptly ceased with the belching of gas. The present illness began one week before admission with a "cold in the chest," coughs and pains. On the night of admission, the patient had pain in

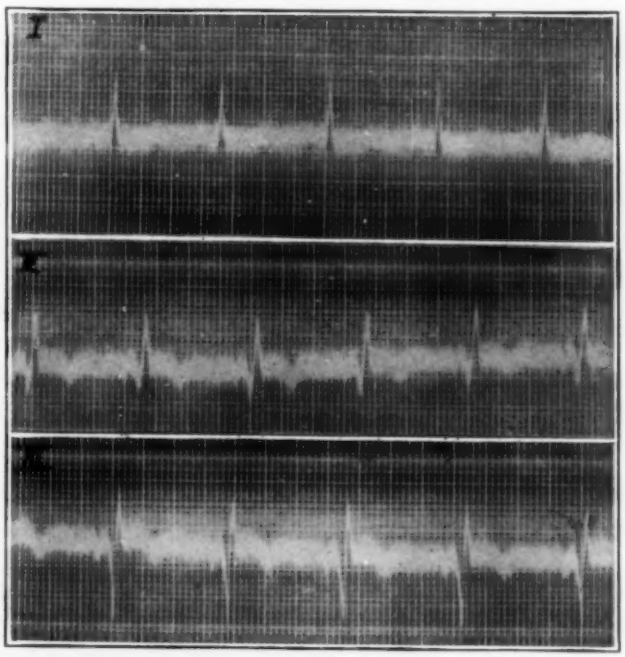


Fig. 4 (Case 3).—Characteristic coronary T waves in Leads II and III, Dec. 3, 1924.

the precordial area, felt faint and dizzy, and fell unconscious. There were no convulsions.

Physical Examination.—The apex rate varied from 40 to 50, with rhythm totally irregular. Auricular fibrillation with heart block was the clinical diagnosis. The heart was moderately enlarged, the sounds were distant, and no pericardial rub was made out. The blood pressure was 86 systolic and 56 diastolic.

An electrocardiogram, December 22, revealed auricular fibrillation with a very slow ventricular rate so nearly regular that auriculoventricular dissociation must have been almost, if not quite, complete. A recent coronary obstruction was indicated by the shape of the T waves in Leads II and III, while the notching of the Q-R-S group gave further evidence of disease of the muscle. Later records showed changes characteristic of an old infarction.

Treatment and Course.—With rest and digitalis, the blood pressure rose to a normal height, 130 systolic and 70 diastolic, and the pulse rate to 60. The temperature was 99 F. on admission, and showed a very slight febrile movement during the first week, rising once to 100.2. The white blood cell count, December 23, was 14,500; polymorphonuclear cells, 78 per cent. The Wassermann reaction was negative.

The patient left the hospital against advice, December 31, and died suddenly three days later.

Two further cases that have come to my attention are not reported. In the first instance, an automobile salesman, aged 50, was suddenly seized with severe pain in the upper chest, and for several days was in a

6. Pardee, H. E. B.: Clinical Aspects of the Electrocardiogram, New York, Paul B. Hoeber, 1924, pp. 81, 82.

grave state of cardiac collapse. The blood pressure figures before or after the attack were not available. When I saw this man about a year later, though the blood pressure was at a normal level, there was dyspnea on slight exertion, and inversion of the T wave in two leads. The second patient was a physician, aged 65, whose blood pressure had been in the neighborhood of 200 mm. for months. He was abruptly overtaken by severe dyspnea and weakness, though pain was conspicuously lacking. The blood pressure fell to 120 mm., and did not rise in the two weeks that elapsed before death. The heart was dilated, and the sounds were muffled. An electrocardiogram was not obtained. The first case is quite typically, and the second case probably, an instance of coronary occlusion.

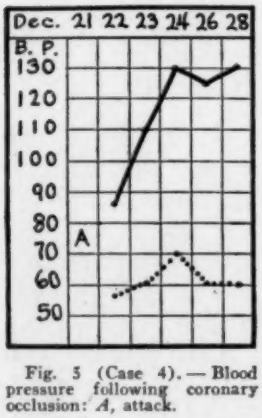


Fig. 5 (Case 4). — Blood pressure following coronary occlusion: *A*, attack.

COMMENT

The recognition of a sudden fall in blood pressure, following an attack of severe cardiac pain, derives its importance from the fact that coronary occlusion brings about this state of hypotension by striking directly at the cardiac output. Following the thrombus formation, or the lodgment of an embolus, in a coronary artery, there occur (1) infarction of the heart muscle to a degree corresponding with the site of obstruction, and (2) impairment or loss of ventricular function according to the area and extent of the infarction. Since the left coronary artery, or its branches, is commonly involved, it is usually the greater circulation that offers the evidence of cardiac failure.

In the milder instances of occlusion, or in cases in which the left ventricle escapes, little or no variation in peripheral arterial tension may occur. Again, as Wearn [7] has observed, single blood pressure readings cannot safely be considered, nor those taken without thought of other factors, such, for example, as the time elapsed since the attack of pain, or the presence of arrhythmia. It is our contention, however, that blood pressure readings, taken daily or even oftener, form an important detail in establishing the diagnosis of coronary occlusion. It is a method of observation at the command of every practitioner.

SUMMARY

Blood pressure readings are an aid to the diagnosis of coronary thrombosis, particularly when angina pectoris is to be differentiated, as illustrated by the cases cited.

A sudden fall in arterial tension, following severe cardiac pain, rests on the physiologic basis of infarction and myocardial insufficiency following an occlusion.

128 East Sixtieth Street.

7. Wearn, J. T.: Am. J. M. Sc. **165**: 250 (Feb.) 1923.

Responsibility of Clinical Teacher.—Those of us who are teachers of clinical medicine bear a great responsibility, for we have a dual aim in view. Our purpose should be not only to produce the capable practitioner but at the same time to encourage the spirit of progress in the future generation. We are indeed responsible for creating the critical attitude of mind that is necessary for the advance of practical therapeutics.—Bramwell, Edwin: *Lancet* **1**:267 (Feb. 7) 1925.

BONE MARROW IN VEINS *

SYDNEY M. CONE, M.D.
BALTIMORE

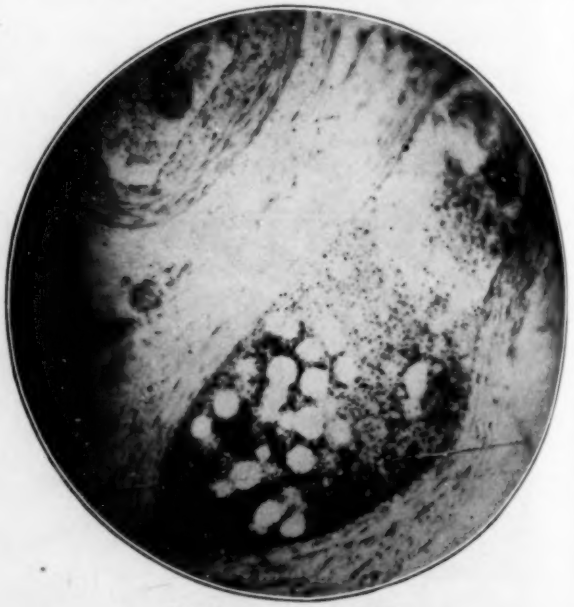
Saleeby [1] has recently written of heterotopia of the bone marrow without apparent cause. In 250 necropsies, I found bone marrow filling the intercostal veins in sixty-eight cases. Age or sex had no influence. Twenty-eight were in chronic passive congestion cases from cardiovascular disease. Typhoid in young persons caused death in four cases; acute infections, in eight cases; cancer, in six cases; exophthalmic goiter, hydrophobia, amebic dysentery, Addison's disease and Hodgkin's disease, in one case each.

The marrow in the veins was seen not only in the large vein but also in smaller branches on the flat sides of the rib. It corresponded in appearance exactly with the appearance of the marrow in the rib—fatty, cellular or fibrous. In one case, in which there was new bone formed in the rib, there was bone in the marrow filling the intercostal vein.

In all the cases the bone showed vital and lacunar absorption, and the marrow was altered.

In a few cases there were myelocytes and giant cells in the lung capillaries.

I first described it in the tibia and rib in a case of osteitis deformans. That giant cells find their way into the circulation has not been infrequently recorded (Arnold, Ponfick, Lubarsch, Maximow and Wright). As Zenoni explains the presence of nucleated red cells



Marrow in intercostal vein.

in the circulation after bleeding, by hydraulic pressure, so Lubarsch suggests hydrostatic (mechanical) influence in carrying pieces of narrow into the lung capillaries.

Bunting, in explaining the formation of bone with cellular marrow in a sclerotic aorta, writes: "A cell of indifferent type wandered and formed various kinds of blood cells. This cell has a large round vesicular nucleus, scanty protoplasm, and has been called large lymphocyte, indifferent cell or myeloblast."

Aschoff describes the finding of bone marrow giant cells in the lung capillaries in cases of diphtheria, pneu-

* From the Department of Pathology, University of Maryland School of Medicine and the College of Physicians and Surgeons.

1. Saleeby, E. R.: Am. J. Path. **1**: 69 (Jan.) 1925.

monia and tuberculosis, and others attributed the presence of marrow cells in the circulation to dyspnea. Arnold, too, ascribed their presence to dyspnea and injury. Lubarsch first noted pieces of bone marrow in the arteries of the lung in 1896. His experiments led him to the conclusion that mechanical means alone were not sufficient to produce these emboli, but an intoxication by tissue cells (parenchymatous cell emboli) was necessary, causing a primary change in the marrow.

Maximow described whole marrow and, in one case, a piece of bone, as emboli in the lung capillaries. He produced them by vibratory mechanical means—tapping the bones. He found giant cells in lung capillaries in rabbits killed suddenly by chloroform or curare, and in a man who was suddenly accidentally killed.

Drinker, Drinker and Lund [2] find by careful experimentation that mechanical measures alone will not disturb the integrity of the normal bone marrow vasculature, but carbon monoxid caused the outflow of marrow cells under perfusion. Increase in blood movement alone will not dislocate marrow cells. The use of saponin as a poison caused a large escape of all sorts of young marrow cells.

It appears that some change in the blood itself is a prerequisite for the appearance of the narrow in the intercostal veins as seen by me. The fact that the veins of bone have no valves and that there is a passive congestion or dyspnea are aids in the production of the phenomenon.

The haversian canals are not infrequently seen exposed at cartilage or periosteum. This was first noted in a case of osteitis deformans with chronic passive congestion. It suggested a means by which whole marrow could be found in veins about bone. The more evident cause of this unusual condition is a mechanical one (hydraulic pressure with suction by difficult breathing) in cases in which the marrow has been more or less changed—reverted more or less to the embryonal—and its cells are more active than usual. This, moreover, is evidenced by the fact that the phenomenon is observed in a few other cases than chronic passive congestion.

Clinical Notes, Suggestions and New Instruments

RAPID PNEUMOCOCCUS TYPE DETERMINATION IN LOBAR PNEUMONIA BY KRUMWIEDE'S METHOD *

LAWRENCE A. KOHN, M.D., BOSTON

The serum treatment of lobar pneumonia, to be successful, depends in part on early diagnosis of the type of pneumococcus responsible for the infection. The mouse method rarely yields a result before ten hours or more. In the effort to shorten this time, Krumwiede,[1] Oliver,[2] and Mitchell and Muns [3] have suggested various methods of direct precipitin determination on sputum without preliminary enrichment in the mouse peritoneum. Krumwiede's method is the simplest of these. The procedure he described consisted in coagulating from 3 to 10 c.c. of sputum in a boiling water-bath, breaking up the clot, adding salt solution and extracting soluble antigen in the water-bath, and layering the supernatant fluid obtained by centrifugalizing on type serums. Of twenty-five tests in which the result was checked by the mouse method, nineteen gave fixed types of pneumococci in the mouse, and of these fifteen gave a correct type reaction. In the other four instances, no precipitate was obtained. In spite of the fact that almost seven years has elapsed since this method was published, it does not seem to have found general use, and it may be justifiable to report the results obtained in a small series of pneumonias during the past winter, in order to call it to the attention of laboratory workers.

In the test as performed, sputum was collected from the patient as early as possible after admission to the hospital, with no especial attention to aseptic precautions. It is important to have available at least 4 c.c. of sputum; if only traces are being raised, the method cannot always be used successfully. The sputum was injected into mice at once, 0.5 c.c. being injected intraperitoneally in the usual way, and the mouse exudates have in all cases been agglutinated as a check on the rapid method. From 4 to 8 c.c. of sputum was then placed in a 15 c.c. centrifuge tube, which was left in a boiling water-bath for five minutes. In a few cases either no coagulation occurred or an incomplete coagulum was formed, but this was uncommon in fixed-type lobar pneumonia. The clot was broken up with a glass rod, and depending on the amount of fluid separating and the volume of sputum used, from 1 to 5 c.c. of physiologic sodium chlorid solution (not sterile) was added and well mixed with the broken up clot by stirring and shaking. The tube was replaced in the boiling water-bath for five minutes, during which interval it was once removed and stirred and shaken to encourage extraction of antigen. It was then centrifugalized at high speed for from five to fifteen minutes, and the clear or opalescent supernatant fluid was drawn off with a capillary pipet and layered over Type I, II and III test serums and a saline control. The serums used were from the laboratories of the New York State Department of Health. When only small quantities of fluid were available, very narrow thin-glass tubes, of 3 mm. internal diameter, were employed; when larger amounts were on hand, 6 mm. tubes were used. In each case, the volumes of serum and sputum extract were equal. The tubes were placed in the incubator at 37 C. or the water-bath at 55 C. When the sputum extract was not too dilute, the reaction was prompt at 37 C. Shaking the tubes as a rule gave gross flocculation as readily observable as the ring test, which latter seemed a less reliable criterion of reaction because of the liability to mistake the juncture of opalescent extract and serum for an early positive test, especially with highly colored serums. The difficulties encountered were two, both of little importance. Occasionally, bits of sputum floated on the surface after centrifugalization. These were removed by wire and the fluid spun down once more, or the fluid was withdrawn from beneath them with the capillary pipet and rubber nipple. When too much saline solution was used as a diluent, it was feared that the reactions might be abolished, and it was found that the precipitinogen could be concentrated by adding from three to five volumes of 95 per cent. alcohol to the extract, centrifugalizing the flocculum and reemulsifying in smaller volumes of salt. A final volume of extract of from 2 to 3 c.c. seemed most desirable save when minimal quantities of sputum were used.

Results of Tests

Mouse Type	Number Examined	Direct Precipitin	Failure
I	7	5	2
II	2	2	0
III	4	4	0
IV	8	No reaction	0

The method has been tried in twenty-one cases. In all instances the direct test was performed at once, and the readings were made and recorded before the mouse exudate was typed. The reactions developed in about ten minutes in about half of the cases; in the others, the interval before a

2. Drinker, C. K.; Drinker, K. R., and Lund, C. C.: Am. J. Physiol. 62: 1 (Sept.) 1922.

* From the medical clinic of the Peter Bent Brigham Hospital.

1. Krumwiede, Charles, Jr.: Determination of the Type of Pneumococcus in the Sputum of Lobar Pneumonia, J. A. M. A. 70: 513 (Feb. 23) 1918.

2. Oliver, W. W.: J. Infect. Dis. 27: 310 (Oct.) 1920; 29: 518 (Nov.) 1921.

3. Mitchell, O. W. H., and Muns, W. E.: J. M. Res. 37: 339 (Nov.) 1917.

positive reading could be made varied from fifteen minutes to two hours. The results are shown in the table.

In one instance in which the direct test failed, the sputum was from a convalescent patient who had raised none at the height of the disease. There was apparently insufficient antigen to give a reaction, though there were enough Type I pneumococci to produce peritonitis in the mouse. In all but one other case, the results have been correct by the mouse check.

The methods of Oliver[3] and of Mitchell and Muns[4] are somewhat similar in principle but slightly more elaborate than that of Krumwiede, over which they appear to offer no advantages. It is suggested that mouse inoculation be delayed until the direct test has been applied; failing to obtain a reaction within fifteen minutes, a mouse should be inoculated. In a majority of cases of fixed-type infection, this will be unnecessary. In no instance in the series here reported or in that of Krumwiede[1] was there a false positive reaction with sputum which eventually proved to be Group IV, so that it is felt that a positive precipitin test obviates the necessity of check.

SUMMARY

Direct precipitin tests on an extract of the coagulated sputum of pneumonia patients, as described by Krumwiede, have given very satisfactory results. The method deserves wider use because of its simplicity, speed and saving in mice. With scanty sputums, or in case of failure to obtain a positive type reaction within a short time of setting up the test, the mouse method should be used.

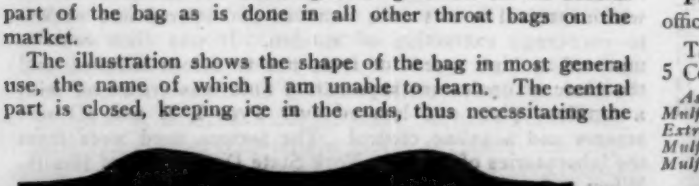
721 Huntington Avenue.

ICE BAG, MODIFIED, FOR USE AFTER TONSILLECTOMY

ALBIN M. PAINTER, M.D., KANSAS CITY, MO.

The advantage of this bag is that it keeps the ice over the tonsil area instead of allowing it to gravitate to the central part of the bag as is done in all other throat bags on the market.

The illustration shows the shape of the bag in most general use, the name of which I am unable to learn. The central part is closed, keeping ice in the ends, thus necessitating the filling of the bag from both ends. The screw cap is dispensed with because it is not comfortable. Closure is the same as on the ice helmet, only the outer sleeve closes with glove snaps. It is absolutely leak proof and comfortable. It is held in place by tapes tied at the back of the neck.



Modified ice bag for use after tonsillectomy.

The bag is made by the Tyer Rubber Company, Andover, Mass.

612 Bryant Building.

Term Expressing Resistance of Carriers to Superimposed Infections.—How could the fact that a "relative immunity" occurs be clearly expressed? It might be possible to say that a subject is immunized relatively, or that he is "relatively immunized," or "tolerant immunized." We are convinced of the necessity of having a single term to express this fact, and it is for this reason that we have proposed the use of the word "premunir" (and words derived from it, such as "premuni"), which (according to its etymology: *prae*, beforehand; *munire*, to provide with, from *maenia*, walls) means to store with, to provide with by way of precaution, to fortify in advance.—Sergent, E.; Parrot, L., and Donatien, A.: *Tr. Roy. Soc. Trop. Med. & Hyg.* **18**:383 (Jan. 15) 1925.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

POISON IVY EXTRACT-LEDERLE (IN ALMOND OIL).—A solution in almond oil of a substance extracted from the fresh leaves of poison ivy (*Rhus toxicodendron*).

Actions and Uses.—Poison ivy extract-Lederle (in almond oil) is used to desensitize persons against poisoning with *Rhus toxicodendron* and to relieve the symptoms of the dermatitis produced through contact with the plant.

Dosage.—For prophylaxis: 1 Cc. injected intramuscularly. For treatment: from 0.5 to 1 Cc. injected intramuscularly at intervals of from twenty-four to forty-eight hours.

Manufactured by the Lederle Antitoxin Laboratories, New York. No U. S. patent or trademark.

Poison Ivy Extract-Lederle (in Almond Oil) 1 Cc.: Syringes containing 1 Cc. of poison ivy extract-Lederle (in almond oil).

Mature leaves of *Rhus toxicodendron*, 15 pounds, are covered with acetone or alcohol, 10 gallons. After maceration for three months or longer, the acetone or alcohol solution is removed and filtered. The filtrate is agitated with animal charcoal in the proportion of 50 Gm. per liter and, after four hours, it is filtered. This liquid is shaken with petroleum benzin in the proportion of 200 Cc. per liter. To this mixture 5 liters of a half-saturated solution of sodium chloride are added. After standing over night, the petroleum benzin layer is removed, filtered and evaporated to dryness under reduced pressure. The residue is dissolved in acetone, filtered, and evaporated until the solids represent 20 per cent. This acetone solution is stored at room temperature for one week or more.

Five parts of this liquid are added to 95 parts of expressed oil of almonds containing 1 per cent. of chlorbutanol and sterlized at 160 C. The finished liquid is stored in an icebox for one week or more and filtered.

POLLEN EXTRACTS-MULFORD (See New and Nonofficial Remedies, 1925, p. 285).

The following pollen extracts-Mulford are marketed in 5 Cc. vials containing 250 units per cubic centimeter:

Ash Tree Pollen Extract-Mulford; Bermuda Grass Pollen Extract-Mulford; Box Elder Pollen Extract-Mulford; Canary Grass Pollen Extract-Mulford; Cocklebur Pollen Extract-Mulford; Corn Pollen Extract-Mulford; Cottonwood Tree Pollen Extract-Mulford; Daisy Pollen Extract-Mulford; Dandelion Pollen Extract-Mulford; Dock Pollen Extract-Mulford; False Ragweed Pollen Extract-Mulford; Goldenrod Pollen Extract-Mulford; Johnson Grass Pollen Extract-Mulford; June Grass Pollen Extract-Mulford; Maple Pollen Extract-Mulford; Marsh Elder Pollen Extract-Mulford; Mountain Cedar Pollen Extract-Mulford; Mugwort Pollen Extract-Mulford; Oak Tree Pollen Extract-Mulford; Orchard Grass Pollen Extract-Mulford; Perennial Rye Grass Pollen Extract-Mulford; Plantain Pollen Extract-Mulford; Redroot Pigweed Pollen Extract-Mulford; Redtop Pollen Extract-Mulford; Russian Thistle Pollen Extract-Mulford; Rye Pollen Extract-Mulford; Sagebrush Pollen Extract-Mulford; Sugar Beet Pollen Extract-Mulford; Sunflower Pollen Extract-Mulford; Sweet Vernal Grass Pollen Extract-Mulford; Walnut Tree Pollen Extract-Mulford; Western Ragweed Pollen Extract-Mulford.

The following pollen extracts-Mulford are marketed in 5 Cc. vials containing 250 units per cubic centimeter and in treatment sets consisting of:

Series A: one intradermal syringe containing 10 units, and five hypo-units (collapsible syringe containers) (doses 1 to 5, inclusive) containing, respectively, 10.5 units, 21 units, 42 units, 87.5 units and 87.5 units.

Series B: one intradermal syringe containing 10 units, and five hypo-units (collapsible syringe containers) (doses 6 to 10, inclusive) containing, respectively, 87.5 units, 175 units, 175 units, 175 units and 175 units.

Series C: one intradermal syringe containing 10 units, and five hypo-units (collapsible syringe containers) (doses 11 to 15, inclusive) containing, respectively, 350 units, 350 units, 350 units, 350 units and 700 units.

Complete Series: the three intradermal syringes and the fifteen hypo-units (collapsible syringe containers) (doses 1 to 15, inclusive) described in Series A, B and C.

Lamb's Quarters Pollen Extract-Mulford; Wormwood Pollen Extract-Mulford.

Prepared by the method given for Pollen Extracts-Mulford (New and Nonofficial Remedies, 1925, p. 285).

PROCEEDINGS OF THE ATLANTIC CITY SESSION

MINUTES OF THE SEVENTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, MAY 25-29, 1925

(Concluded from page 1667)

HOUSE OF DELEGATES

Second Meeting—Tuesday Morning, May 26

The meeting was called to order at 9:30 by the Speaker, Dr. F. C. Warnshuis.

The secretary reported that he had attendance slips of more than the necessary quorum constituting the roll call.

On motion of Dr. E. J. Goodwin, Missouri, duly seconded and carried, the reading of the minutes of the preceding day was dispensed with, the minutes to be printed in THE JOURNAL.

The supplementary report of the Committee on Credentials was postponed to allow the committee an extension of time.

Report by Board of Trustees

The Board of Trustees reported as follows on the resolutions presented the preceding day by Drs. T. C. Chalmers, New York; W. G. Eagleton, New Jersey, and V. G. Vecki, California:

The Board of Trustees makes the following report on the resolutions referred by the House of Delegates:

In the last clause of the resolution of Dr. T. C. Chalmers, relative to a narcotic survey, the Board takes under advisement the matter of an appropriation for correspondence, pending action by the House of Delegates on the report of the Reference Committee on the three previous clauses.

On the resolution of Dr. Eagleton calling for an "ad interim" meeting of the House of Delegates, the Board of Trustees believes that it is impracticable to hold regular "ad interim" meetings because of the financial burden involved, the limitations of time, and the difficulty of assembling Delegates except at times of special emergency.

On the resolution of Dr. Vecki that "each member of the House of Delegates visit each county in his jurisdiction and that the Board support this to the full extent of its resources," the Board recognizes that the principle underlying the resolution is sound. The Board is now doing its utmost and will continue to do all that it can to extend the visiting of official representatives to constituent parts of the Association. In furthering this idea the Board will also make available to each delegate a digest of the proceedings of the annual sessions.

On motion of Dr. J. W. VanDerslice, Illinois, duly seconded and carried, the report of the Board of Trustees was adopted.

Committee of the Whole

On motion of Dr. A. E. Bulson, Jr., Indiana, duly seconded and carried, the House of Delegates went into a Committee of the Whole to hear and discuss the report of the Judicial Council. At 11:50 the House reconvened in general session.

Resolution on Principles of Medical Ethics

Dr. M. L. Harris, Chairman of the Judicial Council, reported as follows on the resolution presented by Dr. Albert Soiland:

WHEREAS, The Principles of Medical Ethics have antedated the histories of people among whom they were developed; and,

WHEREAS, The ethical relation of the doctor and patient cannot be prescribed by civil laws; and,

WHEREAS, The conservation of the patient in life and death must always remain an ethical relation; and,

WHEREAS, The public has never challenged the integrity of the medical profession in this delicate situation; therefore, be it

Resolved, That the Principles of Medical Ethics of the American Medical Association, adopted by the House of Delegates at Atlantic City, June 4, 1912, be extended and amended to include suitable penalties for the violation of these principles.

First, that these rules of ethics are hereby declared to be an integral part of the rules and regulations, constitutions and by-laws, governing each component county unit and scientific section.

Second, that the penalty prescribed for the violation of these ethics shall be censure, suspension or expulsion, as the individual governing body shall elect.

The Judicial Council is of the opinion that the constitution and by-laws of state and county societies provide for penalties to be imposed for violations of the Principles of Medical Ethics, and that this is a matter for determination by those bodies.

Dr. B. L. Bryant, Maine, moved the adoption of the report of the Judicial Council; the motion was duly seconded and carried.

Supplementary Report of Council on Scientific Assembly

Dr. J. S. Horsley, Chairman of the Council on Scientific Assembly, read the following supplementary report, which was referred to the Reference Committee on Sections and Section Work:

As the Section on Stomatology has been abolished, it is necessary to have approval from some section in order that dentists be admitted as Associate Fellows. This council recommends that the word "Stomatology" on the fourth line from the bottom of the Constitution and By-Laws, page 10, being Chapter IV, Section 5, of the By-Laws, be replaced by the words "Surgery, General and Abdominal." The effect of this change will be to have the application of dentists for Associate Fellowship acted on by the Section on Surgery, General and Abdominal.

The application of Dr. William E. Edwards, Los Angeles, for Affiliate Fellowship in the American Medical Association, is hereby approved.

The Council on Scientific Assembly has received a communication from representatives of the American Electro-Therapeutic Association requesting the establishment of a section on physical therapeutics. Two years ago there were similar requests from some of the Fellows of the American Medical Association for a section on physiotherapy. The Council on Scientific Assembly recognizes the great therapeutic value of such measures but believes that physiotherapy in all its forms can be brought more effectively to the attention of the medical profession by papers before the established sections, such as the Section on Pharmacology and Therapeutics, and the Section on Practice of Medicine, than by creating a new section.

On motion regularly made, seconded and carried, the House recessed at 12 o'clock until 2 p. m.

Tuesday Afternoon

The House of Delegates was called to order again at 2:15 p. m. by the Speaker.

Action of Committee of the Whole

Dr. E. Eliot Harris submitted the report of the Committee of the Whole: that the House of Delegates reaffirm confidence in the Judicial Council and that it endorse and approve their present report, and that it is the sense of the Committee of the Whole that every Fellow and member of the American Medical Association should live up to the spirit of the report of the Judicial Council. On motion of Dr. E. Eliot Harris, duly seconded and carried, the report was adopted.

Committee on Reapportionment

Dr. E. A. Hines, Chairman of the Committee on Reapportionment of Delegates, read the following report:

The Committee recommends:

1. That the reapportionment of delegates be effected on the basis of one delegate for each 750 members or fraction

thereof for all constituent associations having a recorded membership of 750 or more. Under this provision of the By-Laws each constituent association with smaller membership is, of course, entitled to one delegate.

2. That the By-Laws be amended as follows: Amend Section 3, Chapter I, of the By-Laws, by substituting "1925" for "1903" in the second line of that section, so that the first sentence of Section 3, Chapter 1, of the By-Laws, shall read:

At the annual session of 1925 and every third year thereafter, the House of Delegates shall appoint a committee of five on reapportionment, of which the Speaker and the Secretary shall be members.

On motion of Dr. Hines, the report was approved and referred to the Reference Committee on Constitution and By-Laws to report at the next meeting with respect to the proposed amendment.

Report of the Special Committee on Constitution and By-Laws

On motion of Dr. G. F. Keiper, Indiana, duly seconded, it was voted that this report be not read but printed and distributed to the delegates in order that they might discuss it Thursday afternoon.

Report of Reference Committee on Sections and Section Work

Dr. Albert Soiland, California, read the following report of the committee:

Your Reference Committee on Sections and Section Work begs to report that it has read and discussed the Report of the Council on Scientific Assembly and that it has approved, by paragraph and then as a whole, the report of the Council as printed on pages 107 to 110, inclusive, of the official handbook.

Your committee recommends that that part of the recommendation of the Council on Scientific Assembly, which was read and not printed—reading as follows:

We recommend that in Chapter XIV, Section 1, of the By-Laws, "Radiology," be added, as recommended by the Reference Committee on Constitution and By-Laws; and

We recommend that in Chapter IX, Section 3, of the By-Laws, in Item 5, the following words be added after "topics":

"and for the first session of a new section."

so that Item 5 will read as follows:

"(5) To appoint officers for meetings making up the Section on Miscellaneous Topics and for the first session of any newly established section."

be adopted.

Your committee feels that the Council on Scientific Assembly has carefully weighed the questions involved and presented to it by various resolutions and desires to commend the Council for its splendid work.

The first section, with reference to a Section on Radiology, was adopted. The second section, pertaining to the supplementary report of the Council on Scientific Assembly, was recommitted to the Committee on Sections and Section Work. The third part, recommending nonestablishment of a section on physiotherapeutics, was adopted. The report as a whole was adopted, with the exception of the portion recommitted.

Reference Committee on Rules and Order of Business

The chairman, Dr. H. P. Linsz, West Virginia, stated that the committee had no report to make.

Report of Reference Committee on Medical Education

Dr. G. E. Follansbee, Ohio, read the following report, which was adopted on motion of Dr. Follansbee, seconded by Dr. Irwin Abell, Kentucky, and carried:

The report of the Council on Medical Education and Hospitals contains many facts which have a bearing on a question that has been agitating the profession; namely, the distribution of physicians. For example, according to their report, though the standard of medical education has been raised, the reduction of medical students was only temporary. Now the number is increasing at the rate of a thousand a year, so that it becomes evident that "the higher entrance requirements are not preventing students from entering medical schools." It is evident, then, that within the five years since 1922 the increase will have equaled the decrease during the fourteen years previous to 1922.

It is the opinion of your committee that the present entrance requirement of two years' collegiate work or its equivalent is sufficient, and that the desirable shortening of premedical education can best be attained by the readjustment in elementary and secondary education that is now in progress. We believe that the length of the medical course can be more advantageously shortened by a reduction of hours of teaching and by the adoption of the "four quarter" system than by the elimination of any subjects. According to the report of the Council, the increasing number of medical graduates will be sufficient to meet the needs of the increasing population, but their proper distribution constitutes the real problem, which is an economic one and will require for its solution all the combined wisdom of the medical profession and the economist.

We commend particularly the work of the Council in standardizing graduate medical education and promulgating information that will permit the graduate student to make an intelligent and wise choice of his course of study.

Your committee is gratified at the increase in the number of hospitals being established in the smaller communities, as shown in the Council's report. It believes that such hospitals provide an inducement to the graduate to go to the place where he is needed, and offer the opportunity for group education, which is in effect a continuous graduate course. The local hospital also furnishes an opportunity for the attainment of special proficiency that leads to the development of the specialist grounded on the broad experience of general practice.

The problem of nurse education, which has become an acute one, shows small progress, in the Council's report, toward solution. The present course of nurse education is not providing nurses willing to do the ordinarily accepted duties and accept the ordinarily expected responsibilities of nursing the sick. As in the education of the medical student, science is overshadowing art in a profession which is largely, if not mainly, dependent on art for its successful practice. The plan of a joint committee of nine members from the nursing profession and three members from the medical profession may develop a solution; but, if so, much time will be occupied. It seems possible to your committee that the establishment of numerous small hospitals with their associated training schools for nurses may in a measure, at least in the smaller communities, offer a solution. In view of the importance of the problem in respect to the practical application of our professional duties, the committee believes that the survey recommended by the Council should have the support of the Association and would recommend that the Board of Trustees give such financial assistance as its judgment indicates.

In the matter of clinical laboratories, it is evident that the Council is accumulating information that will be the basis of an illuminating analysis which it is hoped will be ready for consideration at the next annual session. The establishment of the community hospital will probably go far toward limiting the use of the undesirable commercial laboratory and to provide the small town practitioners with the facilities for practice on which they learned to depend while gaining their education.

Your committee commends, as a whole, the report of the Council. It believes that progress is being made toward the solution of some of the problems that are perplexing the profession. It is pleased that the Council is of the opinion that the shortage of practitioners is being ameliorated and presently will be terminated so far as economic conditions permit. It believes, however, that the tendency of medical education to emphasize the scientific and technical side and neglect the art and ethics of practice is a defect that should receive attention. It also would have been pleased to have the Council offer some suggestions concerning the curriculum that would operate to decrease the tendency of the graduate to anticipate the practice of a specialty before serving an apprenticeship in general practice. Your committee believes that the repugnance of the graduate to the practice of general medicine has much to do with the unequal distribution of physicians throughout the country, and that the opinions, based on observation and experience of men in the actual practice of medicine throughout the country, should receive the same careful, unprejudiced consideration as is given to

the opinion of the educator. The conditions in the different states vary so widely that a comprehensive survey of the entire country will be necessary before a complete solution can be offered.

Report of Reference Committee on Legislation and Public Relations

The following report was read by Dr. Donald Macrae, Iowa, the chairman:

Your committee recommends the adoption of the resolution introduced by Dr. Chalmers, New York, on certain provisions of the Volstead Act and acts amendatory thereto prohibiting, without exception or qualification, physicians from prescribing more than one pint of spirituous liquor to any patient in ten days.

The minutes from the Medical and Chirurgical Faculty of the State of Maryland, presented by Dr. O'Donovan, have been carefully considered by your committee, which recommends:

1. That the war tax on physicians under the Harrison Narcotic Law be abolished and that this matter be referred to the committee to be appointed by your chairman for further study of the narcotic law, as proposed in another section of this report.

2. That the tax on traveling expenses necessary for attendance at meetings of medical societies should be deductible in making up income tax returns.

3. That the tax on the expense of postgraduate study should be deductible likewise.

Your committee recommends the adoption of the resolution introduced by Dr. Chalmers, New York, recommending the appointment of a committee to direct and coordinate the scientific investigation with reference to the problem of narcotic drugs.

The resolution introduced by Dr. Benjamin R. McClellan, Ohio, pertaining to the World War Veterans' Act of 1924, Subsection 10 of Section 202, providing for hospitalization, medical and surgical service, and necessary traveling expenses "to veterans of any war, military occupation or military expedition since 1897 not dishonorably discharged, without regard to the nature or origin of their disabilities," has been thoroughly examined by your committee.

Your committee unanimously recommends its adoption.

It is the unanimous opinion of this committee that the best interests of the public in matters of public health legislation and policy, as well as the status of the medical profession in the United States, require closer touch with federal activities, and that this can be accomplished only by the presence of a full-time representative in Washington of the American Medical Association, and we respectfully urge that the Board of Trustees arrange to carry out these recommendations.

That portion of the committee's report recommending the adoption of Dr. Chalmers' resolution on certain provisions of the Volstead Act was adopted.

The recommendations of the committee with respect to the minutes from the Medical and Surgical Faculty of Maryland were adopted, after an explanation by Dr. W. C. Woodward of the item on income tax deduction for expense in attending scientific meetings.

The portion recommending the adoption of Dr. Chalmers' resolution on the appointment of a committee to direct and coordinate a scientific investigation with reference to the problems of narcotic drugs was adopted.

The portion recommending the adoption of Dr. McClellan's resolution pertaining to the World War Veterans' Act of 1924 was adopted.

The section recommending the appointment of a Washington representative was adopted, after discussion by Drs. T. C. Chalmers, New York; C. W. Richardson, Board of Trustees; W. G. Morgan, District of Columbia; S. W. Welch, Alabama; C. E. Humiston, Illinois; O. S. Wightman, New York, and A. T. McCormack, Kentucky.

On motion by Dr. Donald Macrae, Jr., Iowa, seconded by Dr. I. A. Abt, Section on Diseases of Children, the report as a whole was adopted.

Report of Reference Committee on Hygiene and Public Health

Dr. B. L. Bryant, Maine, read the report of the committee, as follows:

Your committee recomends that the suggestion of organization for disaster work as presented by President Pusey be referred to the Board of Trustees.

Your committee recommends that the resolution, presented by Dr. Hazelton, Ohio, on the subject of cosmetics, be referred to the Board of Trustees with power to act.

Your committee requests that the following resolution be substituted for that submitted by Dr. Wightman, New York:

Resolved, That, owing to the nation-wide need and interest in periodic health examinations, this matter be referred to the executive secretary of the Bureau on Health and Public Instruction with power to call a conference at such time and place as seems best to correlate the work already done and devise a practical plan for adoption.

Your committee submits for your consideration the following resolution:

Resolved, That the House of Delegates of the American Medical Association urge in the strongest possible terms that every medical school in the United States should at once make provision for the education of their students in the matter of periodic health examinations. Such instruction should arouse in every medical student a realization of the importance of such examinations in conserving and promoting the health of the individual examined, and should provide adequate instruction and training in the method of their conduct, in summarizing their findings and in giving suitable advice to such health clients.

As a means to this end and for the purpose of conserving the health of the students themselves, each student should be given such examination at least once a year.

The first section, dealing with the recommendation made by President Pusey in regard to disaster work, was adopted.

The second section, recommending that Dr. Hazelton's resolution on the subject of cosmetics be referred to the Board of Trustees with power to act, was adopted.

The substitute resolution offered by the Committee to take the place of the resolution presented by Dr. O. S. Wightman, New York, on periodic health examinations, was adopted.

The resolution offered by the committee for the education of students in periodic health examinations was laid on the table on motion of Dr. S. W. Welch, Alabama, seconded by Dr. A. J. Bedell, New York, after discussion by Drs. H. M. Brown, Wisconsin, and S. W. Welch, Alabama.

Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. E. L. Hunt, New York, the chairman, read the following report:

1. Your committee recommends that the following proposed amendment to the last sentence of Article X of the Constitution be not adopted. The proposed amendment reads as follows:

A session may be held at any place in the United States or Canada.

2. Your committee recommends the adoption of the proposed amendment to Section 5, Chapter IV, of the By-Laws. Omit the words, "Section on Stomatology" and insert the words, "Section on Laryngology, Otology and Rhinology."

3. To amend Item 5, Section 3, Chapter IX, of the By-Laws by adding the following words after the word "Topics": "and for the first session of a new section," so that Item 5 will read as follows:

(5) To appoint officers for meetings making up the Section on Miscellaneous Topics and for the first session of a newly established section.

4. Your committee recommends that the proposed amendment to Chapter XII of the By-Laws be *not* adopted. The proposed amendment reads as follows:

A Fellow on registering shall designate the section in which he wishes to be enrolled but shall be enrolled in two sections only at any scientific meeting, provided there is no conflict between the meetings of the sections.

The chief objection to this amendment is that it gives each Fellow or member of the American Medical Association the possibility of a multiple voting power.

5. Your committee recommends that the following proposed amendment to Section 14, Chapter XIV, of the By-Laws be adopted and that the present Section 14 be numbered Section 15.

The proposed amendment reads as follows:

Any Fellow accepting an assignment on a section program and failing to be present to read his paper at the time designated, without valid reason, shall be debarred from a place on any section program for a period of two years after the session at which he failed to keep his engagement.

6. We recommend that the Council on Medical Education and Hospitals be composed of five members, instead of being increased to seven, as suggested in the amendment proposed by the Council.

The Committee's recommendation that the proposed amendment to the last sentence of Article 10 of the Constitution be not adopted was recorded; the amendment lies over until next year.

The amendment to Section 5, Chapter IV, of the By-Laws was adopted.

The amendment to Item 5, Section 3, Chapter IX, of the By-Laws was adopted.

The recommendation of the committee that the amendment to Chapter XII of the By-Laws be not adopted was concurred in.

The amendment to Section 14, Chapter XIV, was adopted.

The committee's recommendation that the Council on Medical Education and Hospitals be composed of five members instead of seven was referred back to the committee for further consideration.

The report as a whole was adopted, with the exception of the portion recommitted.

Reference Committee on Reports of Officers

Dr. A. E. Bulson, Jr., Indiana, asked an extension of time for the committee, which was granted.

Report of Reference Committee on Board of Trustees and Secretary

The following report was presented by Dr. E. Eliot Harris, the chairman:

Your committee endorses the beautiful tribute paid by the Trustees to Dr. Walter P. Williamson, chairman of the Board of Trustees, who died, March 2, 1925, and notes with appreciation that the Board will submit further resolutions pertaining to his death.

The Trustees report that on Sept. 22, 1924, Dr. George H. Simmons became editor and general manager emeritus and that on the same date Dr. Olin West assumed the duties of general manager, Dr. Morris Fishbein became editor of THE JOURNAL, and Mr. Will C. Braun became business manager of THE JOURNAL. Your committee feels that these appointments will prove eminently satisfactory.

The report states that THE JOURNAL will in the main be continued as heretofore, with emphasis on the scientific and economic features and news items, all of which will be in the interest of the general practitioner.

Jan. 1, 1925, there were 85,536 subscribers to THE JOURNAL, an increase over the previous year of 4,578. We are pleased to note that the field work in the several states in the matter of solicitation of subscriptions to THE JOURNAL and other publications of the Association has been conducted in cooperation with the officers of constituent associations, the effort being made at the same time to secure members for county associations. The results reported in Georgia and New Jersey, where 232 applications for membership, 413 subscriptions to THE JOURNAL and thirty-nine subscriptions to special journals were secured, is evidence of the desirability of this procedure.

The total number of Fellows on the mailing list of THE JOURNAL, Jan. 1, 1925, was 52,238, an increase of 2,063 over 1924.

Your committee is of the opinion that the advertising business of THE JOURNAL has been handled as advantageously as possible under existing conditions, considering particularly the high character of the advertising carried by THE JOURNAL. We commend the reduction of the subscription price of THE JOURNAL.

The work of the Cooperative Medical Advertising Bureau is to be commended. This bureau serves as the advertising agent for such of the state journals as desire to utilize its services. Undoubtedly it secures for these journals much approved advertising that would otherwise not come to them. Commission is charged for this service, but at the end of the year the unused portion thereof is rebated. The sum of $5,500 was thus returned, on a percentage basis, to the publications participating. We note with satisfaction that the Board states that this service is very helpful to these journals and that expressions received from their editors and publishers indicate that it is thoroughly appreciated. Thirty-one state journals are now being served by the bureau, which include all except one of them, and the committee is happy to state that the delegates consulted from the state publishing that journal are of the opinion that the advertisements in their journal will probably be favorably adjusted in the near future.

The policy of the trustees in continuing the publication of the special journals, including the Spanish Edition of THE JOURNAL, is commended. The fact that there is a loss on some of these publications is unfortunate, but cannot be prevented in the nature of things. It is believed that these publications constitute a distinct contribution by the American Medical Association to the advancement of scientific medicine. The House of Delegates should specifically express appreciation of the help rendered by the Rockefeller Foundation in financing the Spanish Edition, amounting to $12,902.05 during the past year, in addition to the sum of $2,537.60 covering depreciation from moneys received from foreign countries.

Your committee feels that special mention should be made of *Hygeia*. This publication appears to be answering its purpose, and the deficit incurred is justified. It is now circulating among laymen to an extent greater than among physicians, and it is the laymen that we desire most to reach with this magazine. It is recommended that the policy of the Trustees in maintaining the standard of the magazine be commended.

Your committee approves the change in designation of the Propaganda Department to the more expressive "Bureau of Investigation," and commends the good work of this bureau. It is worthy of special comment that more inquiries relative to quackery and "patent medicines" have come in from laymen than from the medical profession, and that the increased use of the information given out by the bureau is in the interest of community health. In this connection, the committee recommends that in referring to quack remedies the term "nostrum" should be used hereafter instead of "patent medicine."

The work of the Council on Pharmacy and Chemistry has always received the highest commendation from the House of Delegates, and it should at this time receive your unqualified approval. The special thanks of the House are due the members of the Council, who serve unselfishly and without remuneration. The work of the Council in conducting therapeutic research and the chemical laboratory is considerable. The committee recommends to the Board of Trustees that, if found practicable, the work of the Council be so extended as to include all physical agents used for therapeutic purposes, adding to the personnel of the Council such physicists as may be required.

The policy of the trustees in conducting a library of current literature rather than of standard textbooks is commended.

It is recommended that the policy of financially supporting scientific research be continued.

The committee is of the opinion that the Bureau of Health and Public Instruction is proceeding along proper lines in its endeavors to instruct the public concerning health matters. They should be extended and new methods added from time to time as they may be divised. It is of especial importance that efforts to cooperate with constituent state associations be persisted in. Undoubtedly, much good can be accomplished by helping state associations to plan publicity campaigns. Of especial importance, also, is the matter of periodic health examinations by the family physician. The forms provided by the Bureau of Health and Public Instruction will aid the physician, and doubtless the knowledge that such a form is available will encourage the physician to undertake this work. In addition there is a manual bearing on the subject which will soon be available.

The work of the Bureau of Legal Medicine and Legislation is commended. The services of this bureau have been freely offered to constituent associations, and in many instances have been used to good advantage. It is recommended that the endeavors of the bureau in regard to the national prohibition act, narcotic laws, the Veterans' Bureau, federal income tax, medical defense, medical practice acts, protection of medical research, lye legislation, cosmetics and dyes and reorganization of federal health activities be approved and continued along the lines set out in the report.

It is especially recommended that the House of Delegates formally endorse the "American Association for Medical Progress, Inc.," formerly the "Society for Friends of Medical Progress, Inc.," as suggested.

Approval of the Memorial Tablet to Dr. J. N. McCormack, erected in the assembly room of the Association Building in Chicago, is recommended.

The appropriation made for a cooperative survey of medical education in the United States, to be undertaken jointly by the medical schools, the Council on Medical Education and Hospitals, the Association of American Medical Colleges, and other organizations and institutions interested in medical education, is approved and the work commended. This is one of the live problems of medicine and can be solved only when all the factors involved are known.

The presence at this session of delegates from the British and Canadian Medical Associations is noted with pleasure and gratification, and we are happy to know that the courtesy will be returned and thus a pleasing and profitable custom inaugurated. In this connection, the committee joins the Trustees in the belief that it will not be possible for the American Medical Association to meet jointly with the Canadian Medical Association at any point outside the territorial limits of the United States.

Approval of the plan to arrange for a memorial tablet in the Association Building in Chicago to Dr. N. S. Davis is recommended.

The scientific exhibits prepared for the annual sessions are worthy of the consideration of all who attend, and this enterprise is to be commended.

It is recommended that the course of the Trustees in regard to the graduate extension work be approved.

There appears to be no reason why the Association should not join with the American Association of Milk Commissions in an effort to have the Department of Agriculture appoint a commission for the study of foot and mouth disease, and the resolution to that end presented by the Trustees should be adopted by the House of Delegates.

It is earnestly urged that each member of the House of Delegates read carefully the paragraphs in the Trustees' report pertaining to the business affairs of the Association. The subject is dealt with clearly and concisely. The committee feels that the Trustees are to be congratulated on their policy of accumulating a surplus only as is considered necessary for safeguarding the business interests of the Association; devoting the income otherwise to the extension of its several activities.

Each recommendation contained in the report was voted on separately and adopted. One of the recommendations relating to *Hygeia* was supplemented by an amendment presented by Dr. A. E. Bulson, Jr., Indiana, to the effect that the members more heartily support this publication both by their subscriptions and by their influence. The report of the committee was then adopted as a whole.

Dr. George H. Simmons, Editor and General Manager Emeritus, was invited to the platform and addressed the House briefly.

Report of Reference Committee on Miscellaneous Business

Dr. T. O. Freeman, Illinois, reported that the Reference Committee on Miscellaneous Business recommended the adoption of the resolution on medical taxes, presented by Dr. M. A. Tate, Ohio; the resolution on listing physicians in telephone directories, introduced by Dr. Wells Teachnor, Ohio, and the resolution on the investigation of apparatus, introduced by Dr. Joseph F. Smith, Wisconsin, which was as follows:

WHEREAS, From time to time there are offered for sale to members of the medical profession and to hospitals many nonmedicinal agents of alleged therapeutic value, consisting of electrical devices, mechanical contrivances, colored lights, various kinds of lamps, etc., the exact nature and action of which the individual members of the profession at large, because of the lack of the necessary technical skill, adequate facilities and instruments of precision, are not in a position to evaluate correctly; and

WHEREAS, The purchase of such pieces of apparatus, often on the misrepresentation of persons offering them for sale, results in great financial loss to the members of the profession annually; and

WHEREAS, The use of such devices and apparatus without adequate understanding and control on the part of the physicians employing them tends to impair the physicians' alertness in making a diagnosis, thereby resulting in loss of time and money to patients; therefore, be it

Resolved, That the trustees of the American Medical Association be empowered to appoint a Council on "Nonmedicinal Agents" similar to the Council on Pharmacy and Chemistry, consisting of at least two physicians, two physiologists, two pathologists and two clinicians, whose duty it shall be scientifically to investigate and report on the value and merits of all nonmedicinal apparatus and contrivances offered for sale to physicians and hospitals, and to publish in THE JOURNAL from time to time the results of its investigations.

Resolved, That the matter be referred to the Board of Trustees with request for action.

The recommendations in the report were acted on separately, and all were favorably received. The recommendation in regard to requesting the American Telegraph & Telephone Company to arrange with its subsidiary companies for special listings in the classified section of their directories for fully qualified physicians and surgeons was amended to include the independent telephone companies as well. The report was adopted as a whole.

Supplementary Report of the Reference Committee on Sections and Section Work

Dr. Albert Soiland, California, presented the following supplementary report of the Reference Committee on Sections and Section Work, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

Your committee recommends that the report of the Council on Scientific Assembly, reading as follows:

This Council recommends that the word "Stomatology" on the fourth line from the bottom of the Constitution and By-Laws, page 10, being Chapter IV, Section 5, of the By-Laws, be replaced by the words "Surgery, General and Abdominal."

be changed by substituting for the words "Surgery, General and Abdominal" the words "Laryngology, Otology and Rhinology."

It also recommends that applications of dentists for associate fellowships be acted on through the Section on Laryngology, Otology and Rhinology.

It was voted that, when the House recess, it do so until 1:30 on Thursday, and that Dr. Hubert Work, Secretary of the Interior, be heard at that time.

New Business

RESOLUTION ON EVOLUTION

Dr. H. M. Brown, Wisconsin, presented the following resolution in regard to the prohibition of the teaching of the subject of evolution in certain schools, which was referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, Legislatures in several states have enacted legislation relative to the teaching of scientific theories and facts in their educational institutions, and

WHEREAS, Legal procedure is now in process in the state of Tennessee to determine the right of the legislative body thus to inhibit the dissemination of scientific knowledge, and

WHEREAS, A study of the development of mankind ethnologically, embryologically and anthropologically is fundamental to the proper comprehension of scientific medicine; therefore, be it

Resolved, By the House of Delegates of the American Medical Association, that any restrictions on the proper study of scientific fact and theory in regularly established scientific institutions be considered inimical to the progress of science and to the public welfare.

RESOLUTION ON POSTGRADUATE EDUCATION

Dr. Donald Macrae, Iowa, presented the following resolution in regard to the indiscriminate organization of irre-

sponsible and unscientific commercial postgraduate surgical schools, which was referred to the Reference Commiittee on Medical Education:

Resolved, That in the opinion of the members of the American Medical Association the indiscriminate organization of irresponsible and unscientific short course, commercial, postgraduate surgical schools is bringing disgrace on the surgical profession and decided detriment to the general public, and that we therefore urge on the American Medical Association the necessity of standardization of postgraduate, as well as undergraduate, medical education, and that pending such standardization we recommend to the members of the American Medical Association, and similar reputable organizations who are connected with such laboratories, that they sever their connections with such institutions.

MOTION ON "HYGEIA"

On motion of Dr. A. E. Bulson, Jr., Indiana, it was voted that the House of Delegates recommend that all Fellows and members of the American Medical Association subscribe for a copy of *Hygeia*, to be kept on the reception room tables of their offices.

The meeting recessed at 4:20 o'clock.

Third Meeting—Thursday Afternoon, May 28

The House of Delegates was called to order at 1:35 by the Speaker, Dr. F. C. Warnshuis.

The Secretary read a telegram from Dr. Thomas McDavitt, St. Paul, a member of the Board of Trustees, detained at home by illness. On motion of Dr. J. S. Pettit, the Secretary was instructed to send a telegram to Dr. McDavitt expressive of the regard and esteem in which he is held by the House and extending the good wishes of its membership for his early recovery.

On motion of Dr. George F. Keiper, Indiana, duly seconded and carried, it was voted that the reading of the minutes of the preceding session be dispensed with and they be approved and printed.

The meeting was addressed by Dr. Hubert Work, Secretary of the Interior.

Address of Hon. Hubert Work

Hon. Hubert Work, Secretary of the Interior, addressed the House as follows:

Mr. Speaker, I was about to say Fellow-Members of the House of Delegates—I'll let it stand. For eighteen consecutive years I met with the House of Delegates of the American Medical Association, and I would like to say now what I have felt many times, that I have had no association in my life before and I can say that I have had none since that I appreciate so much or which I have considered as great an honor as having been a member of this House of Delegates and for four years its Speaker.

I frequently said during the trying times of my speakership that I believed a man who could preside over this House of Delegates with its keen perceptions and its active intellect and its soullessness, for duty's sake, if you please, could preside over any body of distinguished men in the world. My later experience and my later contacts, detached from medicine, have convinced me of the accuracy of my judgment on that occasion.

No man, Mr. Speaker, as you have learned, can preside over this House of Delegates for two or more consecutive years, without realizing that they are a type of men by themselves; they are actuated by motives different from those common to mankind as a whole.

The House of Delegates, of course, is made up of educated men from their several states, but back of all that, the House of Delegates, practitioners of medicine, ethical practitioners everywhere, are actuated by something a little different from any other organization of men to be found anywhere, and that I construe to be the spirit of service. All other organizations that I know of or know about have other motives than that. It is the purpose of advancing them in their business or for personal aggrandizement; but the spirit of service that actuates medical men is a little different from the spirit that actuates other men in this world.

It is the spirit of service that has endeared the great physician to the memory of man. We worship the great physician because of his spirit of public service in human relations.

Not many of us understand the theories of divine origin, and not all of us believe them; but the human touch, public service in human relations, is what has caused the world to worship the Christ for two thousand years.

I don't mean to get serious, because when I came up here I had many stories that I was going to tell; some of them I had heard and some of them I made up, but I forget them all when I see you men here. There is so much more in life than telling stories.

This House of Delegates, constituted as it is of selected men, was the child of the very fertile brain of George Simmons. It has justified itself since it was instituted in 1906, I believe. It has found its own place in American medicine.

It is not often given to a man to sit in the shadow of the monument he has erected for himself. That has been given to our compatriot, Dr. George Simmons. The impress of this man on the American Medical Association will be visible long after all of us present will have ceased to remember. (Applause.)

I understand from my contacts since I have come here that many of the same questions are before you that have come up annually for many years. Some of them have not been prosecuted because perhaps the time was not ripe, and one of these questions perhaps I might refer to is the question of legislation. That has interested me all of my medical life. The time was when I felt that we should have federal legislation that would control the practice of regular ethical medicine. I have rather changed my mind on that position in the last few years. I recall very distinctly the work done by Dr. J. N. McCormack many years ago in that connection, and of him it may be properly said at this time that no man before and perhaps no man since and perhaps no man will arise among us who had the gift of personal contact and at the same time the enlarged vision of ethical medicine that had Dr. J. N. McCormack. We were not able to accomplish that under his leadership. We couldn't have under any leadership. I think now that perhaps it was just as well that we didn't.

Congress now is made up of representatives of men who are elected by direct primaries; they represent not the country at large only as they once did, but they represent the district from which they come. The place to effect legislation, in my judgment, is in the congressmen's or senators' districts at home. That will not be difficult to do. The medical profession can do that itself. Organized as you are with the county medical societies at home to work through, you can convey to your representatives in Congress your desires in regard to legislation very much more effectively than you can by a representative at Washington, in my opinion.

There are many lobbyists in Washington. They all represent a selfish interest. The moment the great American Medical Association, an ethical organization, intended solely for the purpose of eliminating bad tendencies, sends a representative to Washington, he will be that instant known as a lobbyist, and it will be assumed that he is trying to put out things of commercial interest to the medical profession. Commerce and scientific, ethical medicine are not related at all. The study of scientific medicine and the practice of it is a religion; it is a good deal nearer a religion than any other vocation on this earth. It ought to be kept far above the suspicion or the taint of commercialism.

It would be far better if the congressman at home were made to feel that the better element of his people want certain things accomplished to protect public health. Make it plain that it is not intended to protect the doctor, and make it plain that we don't care at all who practices medicine or what he practices so long as he is well grounded in anatomy and physiology and knows enough pathology to recognize disease when he sees it. Impress on them that that is our only interest in antagonizing the quack and the upstart and the man who is not qualified. Tell them that it is our purpose to further preventive medicine and explain to them that all medicine in its last analysis is preventive medicine, to prevent death, to prevent invalidism, to prevent deformed cases, and that it is really in the last analysis all preventive.

If you can make that clear to your representatives in Congress, you don't need any local representative to lobby in Congress for you. In my opinion, it would detract from the dignity of ethical, scientific medicine to do it.

I have no doubt you have several different minds on this question. This is a detached opinion. I am not even a member of the House of Delegates, but through your sufferance I am allowed to speak for a moment to you.

The practice of medicine, as I said a moment ago, seems to have reverted to the question of preventing disease. Now, if we take that as our text and work from that and get it to the people that that is our purpose, we shall have a better standing among them than ever before. The ethical medical profession stands higher in the public estimation today than it ever has in its history. The attitude of the lay press toward the regular medical profession is absolutely good. They don't want to make mistakes, they want to encourage that which will be of public benefit, and the sympathy of the public press and of the great writers for the public press was never as acute as it is today.

All in the world we need to do is to advise them of what we are trying to do and practice medicine in the open. The open door policy in the practice of medicine will be just as effective as it is in some lines of government.

I promised not to talk long, but I want to assure you that the atmosphere of this House of Delegates is most attractive to me. I felt when I came in here after three years' absence that I was getting back home.

The analytic quality of the medical mind is unsurpassed by any group of men, and the fact that you were willing to see me and to let me look at you for a moment is a very great pleasure to me, and, Mr. Speaker, a very great honor. (Applause.)

Report of the Committee on Credentials

The Committee on Credentials reported 127 accredited delegates registered, and the credentials of three additional delegates were later approved, so that the total number of delegates present was 130. The Secretary called the roll.

Election of Officers

Under Order of Business No. 4, Election of President-Elect, Dr. E. Eliot Harris, New York, nominated Dr. Wendell C. Phillips, New York; seconded by Drs. J. C. Lyter, Missouri; C. E. Humiston, Illinois; William H. Mayer, Pennsylvania; William F. Campbell, New York; Victor G. Vecki, California; George F. Keiper, Indiana, and A. W. Hornbogen, Michigan. Dr. A. J. Bedell, New York, moved that the nominations be closed. The motion was seconded by Dr. Albert E. Bulson, Jr., Indiana, and carried. Dr. Wendell C. Phillips was unanimously elected President-Elect.

For Vice President, Dr. Philip Marvel, Atlantic City, was placed in nomination by Dr. I. A. Abt, Section on Diseases of Children; seconded by Drs. T. C. Chalmers, New York; W. P. Eagleton, New Jersey, and W. J. Ferguson, Missouri; on motion of Dr. A. T. McCormack, Kentucky, seconded by Dr. E. E. Harris, New York, the nominations were closed. Dr. Marvel was unanimously elected Vice President.

For Secretary, Dr. Olin West, Chicago, was nominated by Dr. J. W. VanDerslice, Illinois; seconded by Drs. O. S. Wightman, New York, and J. C. Ellett, Tennessee. On motion of Dr. T. S. Cullen, Maryland, duly seconded, the nominations were closed, and Dr. Olin West was unanimously elected Secretary.

For Treasurer, Dr. Austin Albert Hayden, Chicago, was nominated by Dr. J. H. Walsh of the Board of Trustees; seconded by Dr. A. T. McCormack, Kentucky, who moved that the nominations be closed. Dr. Hayden was unanimously elected.

Vice Speaker Rock Sleyster, Wisconsin, took the Chair while nominations for Speaker of the House were in order. Dr. Fred C. Warnshuis was nominated by Dr. C. S. Gorsline, Michigan; seconded by Dr. A. E. Bulson, Jr., Indiana, who moved that the nominations be closed. The motion was duly seconded, and Dr. F. C. Warnshuis was unanimously elected Speaker of the House of Delegates.

For Vice Speaker, Dr. Rock Sleyster, Wisconsin, was nominated by Dr. H. M. Brown, Wisconsin; seconded by Dr. A. W. Hornbogen, Michigan. On motion of Dr. E. Eliot Harris, New York, seconded by Dr. A. E. Bulson, Jr., Indiana, the nominations were closed. Dr. Rock Sleyster was unanimously elected Vice Speaker.

Under the election of Trustees, it was moved by Dr. A. T. McCormack, Kentucky, duly seconded and carried, that the first Trustee elected serve for three years, the next two for four years, and the remaining member be elected for the unexpired term of Dr. W. T. Williamson.

The Trustees elected were Dr. A. R. Mitchell, Lincoln, Neb., to succeed himself for three years (nominated by Dr. Donald Macrae, Jr., Iowa; seconded by Dr. T. B. Throckmorton, Section on Nervous and Mental Diseases; J. P. Lord, Nebraska; E. J. Goodwin, Missouri; W. L. Bierring, Section on Practice of Medicine, and T. S. Cullen, Maryland); Dr. D. Chester Brown, Danbury, Conn., to succeed himself for four years (nominated by Dr. W. R. Steiner, Connecticut; seconded by Dr. H. G. Stetson, Massachusetts; Dr. D. E. Sullivan, New Hampshire, and Dr. E. E. Harris, New York); Dr. Edward Carey, Texas, for a term of four years to succeed Dr. Oscar Dowling, Louisiana (nominated by Dr. S. W. Welch, Alabama, and variously seconded). Dr. Hubert Royster, North Carolina, was also nominated by Dr. Irvin Abell, Kentucky, to succeed Dr. Oscar Dowling as Trustee. The ballot was 80 votes for Dr. Carey and 33 for Dr. Royster. The election of Dr. Carey was made unanimous on motion of Dr. Irvin Abell, Kentucky, duly seconded and carried.

Dr. Joseph A. Pettit, Oregon, was nominated by Dr. D. E. McGillivray, Washington, to fill the unexpired term of Dr. W. T. Williamson; seconded by Drs. H. P. Linsz, West Virginia, and A. T. McCormack, Kentucky. The nominations were closed, and Dr. Pettit was unanimously elected.

Address of President-Elect Wendell C. Phillips

Dr. Wendell C. Phillips, New York, addressed the House as follows:

Mr. Speaker, Mr. President, Officers of the Association and honored members of this House of Delegates:

Just at this moment I would rather be sitting in the old place among the delegates than to be the flabbergasted newly elected President of this Association, and I hope that you will forgive me if instead of trying to make a flowery address I permit myself to indulge in a little sentiment.

I am not going to tell you how many years ago, but it was a great many, I was born barefooted on a farm up in the rock-ribbed valley of the grand old St. Lawrence River, and as a farmer's boy I labored for years. (I am telling you this to show what may sometimes happen to a boy who was born in humble circumstances.) Sometimes since then I have been asked why it was that I was able to get along fairly well in a great city, and some of you men who were born on a farm will appreciate it when I say that in my boyhood I used to follow the plow, sometimes through stony ground, and I have known what it is to have the point of the plowshare hit a stone and throw me way up in the air over the plow handle. My answer to their questions was that I had courage to get up and go on plowing after having had such an experience.

You can little realize what it means to our boys of this country, born in humble circumstances, who have signal honors conferred on them later in life, and that is my experience. I am just going to say that during the days I am telling you about I had the guidance and the counsel of a wonderful, godly mother, and I am going to take this occasion to pay tribute to her for whatever success I have ever had in my life. (Applause.)

I do feel that I would rather be down in the ranks, for I can hardly remember how long ago it was when I began to wear the blue ribbon, not of temperance but of the American Medical Association. It has been a wonderful experience to labor with you good fellows all these years, and I do conscientiously feel that this honor has come to me as a man

who has come up from the ranks, and they are wonderful ranks, for you men constitute the ranks of a great association.

Again, I wish to say to the members of this House of Delegates that the honor (and it is a great honor, the greatest that can be conferred not only by any medical body in this country but by any medical body on God's footstool) coming to me as it does come as an opportunity for service, and I look on it as that opportunity, and for the next two years I pledge you my devotion to the highest interests of public health, to the highest interests of the medical profession and to help carry out the ideals which we all have that will bring about the greatest results.

Dr. Booth has repeatedly said, when any delegate was spoken of, that he was a classmate of his, and it got to be so that we thought there wasn't a member of this House of Delegates who wasn't a classmate of Dr. Booth's. I just would like to feel that you are all classmates of mine for the next two years, and I want to labor that we may bring about what we all have in our minds and our hearts, the highest ideals of medicine.

I thank you so much for this honor. (Applause.)

Nominations to Standing Committees

President W. D. Haggard presented to the House the following nominations to standing committees:

Judicial Council: George E. Follansbee, Ohio.

Council on Medical Education and Hospitals: Ray Lyman Wilbur, California; Louis B. Wilson, Minnesota; Walter F. Donaldson, Pennsylvania.

Council on Scientific Assembly: J. Shelton Horsley, Virginia.

On motion of Dr. A. E. Bulson, Jr., Indiana, regularly seconded and carried, the nominations were confirmed.

Nomination for Affiliated Fellowship

The Secretary read the report of the Council on Scientific Assembly approving the nomination of William E. Edwards, Los Angeles, for Affiliate Fellowship, which was confirmed by the House.

Nominations for Associate Fellowship

The Secretary read the following nominations for Associate Fellowship, all of which were confirmed by the House.

To the House of Delegates:

The Judicial Council Nominates the following for Associate Fellowship in the American Medical Association:

AMERICAN MEDICAL MISSIONARIES

Benjamin, Lena A., A. B. M. Hospital, Nellore, India.
Bussdicker, Russel D., American Hospital, Kermanshah, Persia.
Clark, O. E., Mar Lodge, Mussoorie, India.
Coole, Thomas H., Secretary Methodist General Hospital, Foochow, China.
Coyne, Arthur E., Narsapur, Kistna District, India.
Dilley, F. E., Temple Hill Hospital, Chefoo, China.
Dyrnes, John O., Manasoa, Benenitra, Tulear, Madagascar.
Foster, John H., Yale Mission, Changsha, China.
Gifford, Martha J., Ellen Mitchell Mem. Hospital, W. A. B. F. M. S. Talaing Mis. Moulmein, Burma.
Henderson, A. H., A. B. F. M. Society, 276 Fifth avenue, New York.
Hendrick, Rhoda Grace, Medical College for Women, Vellore, N. Arcot, S. India.
Kibby, Sydney V., St. Lukes International Hospital, Tokyo, Japan.
Lewis, William Bryant, Lusambo, Sankuru District, Congo Belge, Central Africa.
Lichtwardt, H. A., American Hospital, Meshed, Persia.
Lohrentz, Abraham Martens, Kai Chow Hospital, Kai Chihli, China.
Morse, William R., Union University, Chengtu Szechwan, W. China.
Nichoson, Hope H., Kulpabar, United Province, India.
Ostrom, Hjalmar, Fondo, Gombe, Belgian Congo.
Robinson, Hugh L., 572 Huntington Avenue, Boston.
Seaton, Stuart P., American Presbyterian Mission, Nodoa, Hainan Is., S. China.
Walters, Ota G., Hunan Yale Hospital, Changsha, Hunan, China.
Wilmoth, Clifford L., American Mission Hospital, Addis Abeba, Abyssinia, Africa.

APPLICANTS LIVING IN ADJACENT COUNTRIES

Haffey, Matthew J., 152 Carlton Street, Toronto, Canada.

The following nominations for Associate Fellowship were submitted by the sections named:

SECTION ON PHARMACOLOGY AND THERAPEUTICS

Dooley, Marion Sylvester, Syracuse, N. Y.
Severac, Marie, Philadelphia.

SECTION ON PATHOLOGY AND PHYSIOLOGY

Cattell, McKeen, New York.
Schultz, Oscar T., Chicago.

SECTION ON STOMATOLOGY

Brophy, Charles J., New York.
Crane, Arthur B., Washington, D. C.
Cross, Harold DeW., Boston.
Downs, William G., Jr., Evansville, Ind.
Guilford, Dudley, Philadelphia.
Johnson, A. LeRoy, Philadelphia.
Lewis, Osborn G. L., Philadelphia.
Mershon, John V., Philadelphia.
Prinz, Hermann, Philadelphia.
Salvas, J. Clarence, Philadelphia.
Sears, Victor H., Salt Lake City.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

Kahn, Reuben L., Sc.D., Lansing, Mich.
Maclachlan, Wills, Toronto, Ont., Canada.

Place of 1926 Annual Session

The following cities were placed in nomination for the next annual session: Louisville, Ky., by Dr. Irvin Abell, Kentucky; Atlanta, Ga., by Dr. Allen H. Bunce, Georgia, and Dallas, Texas, by Dr. Holman Taylor, Texas. The ballot resulted in 115 votes being cast: 58 for Dallas, 37 for Atlanta, and 20 for Louisville, and Dallas was declared the place of the next meeting. The vote was made unanimous on motion of Dr. A. T. McCormack, Kentucky, duly seconded and carried.

Supplementary Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. E. Eliot Harris, New York, read the following report of the Reference Committee on Reports of Board of Trustees and Secretary, which was a supplemental report, and moved its adoption:

Your committee finds the report of the Secretary complete and satisfactory in all particulars. We are happy to note that the membership of the Association is now 90,646, the largest in its history, and that Fellowship has also reached a point higher than at any time before; namely, 56,121, which is 2,058 more than last year. This indicates that there is a growing appreciation of the value of Fellowship.

We note with satisfaction, in this connection, that state secretaries have been cooperating splendidly in securing the enrolment of Fellows from their respective states. We recommend that constituent state associations be urged to make the enrolment of Fellows a prime endeavor. We are of the opinion that such policy will help to improve conditions locally.

We are pleased to note also that constituent state associations are more than ever before giving attention to the important matter of definite policies in the direction of their activities. Haphazard endeavor may succeed in many things, but this is a day of concrete organization and coordination of effort. It only remains for the state associations to work in such unison as may be possible, local conditions being considered, to bring about a satisfactory state of affairs throughout the country. In this connection, there seems to be more than ever before a disposition to appeal to the individual members, which is a wholesome state of affairs. Four additional state associations have employed full-time executive secretaries; namely, Indiana, Michigan, Minnesota and West Virginia. While this policy is practicable only in the larger states, the results in these states will serve in a measure to guide the work of the smaller states. It is recommended that constituent state associations be urged to give special attention to the matter of organizing district societies, reorganizing and reviving dormant county societies, and combining the weaker county societies for their mutual benefit.

The Annual Conference of State Secretaries continues to be a success. Through this agency, perhaps more than in

any other way, the coordination of effort necessary to success may be secured. We recommend that these conferences be continued, and that the policy of inviting editors of state journals to participate be also continued.

The *Bulletin* appears to be serving its purpose notwithstanding the Secretary is of the opinion that it is not being fully utilized in the way intended. We are of the opinion that as time goes on the value of this publication will be fully realized. It is not possible to include in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION discussions such as are intended to be circulated through the medium of the *Bulletin*, and such discussions are essential to the welfare of the Association. No matter how intelligent or self-sacrificing the leaders of any movement may be, if those who are led do not know what is being done, there will certainly be a lack of appreciation. The rule applies here as well as elsewhere, though perhaps in a lesser degree. The *Bulletin* is commended and called to the attention of all who are due to receive it.

The policy of sending representatives of the Association to meetings of its constituent bodies is commended. We recommend that this practice be continued.

Finally, we desire to call attention to the necessity of acquainting the members of this great Association with the work done by this House of Delegates. While it is true that a summary of the proceedings of the House will be published in THE JOURNAL, many of our members do not receive THE JOURNAL. It is more or less complicated, and must be studied to be understood. It is recommended that delegates make detailed reports of our proceedings, and report to their members through whatever means may be found most advantageous.

The motion was seconded and carried.

Resolutions from Section on Ophthalmology

Dr. Cassius D. Wescott, Section on Ophthalmology, presented a resolution from that section having to do with eye injuries, and moved its adoption:

WHEREAS, The report of the Committee on Compensation for Eye Injuries, signed by Nelson M. Black, Albert C. Snell, James Patton and Harry S. Gradle, and published in the Presessional Volume of the Section on Ophthalmology, has been unanimously adopted by the Section on Ophthalmology; therefore, be it

Resolved, That the House of Delegates endorse the said report on Compensation for Eye Injuries.

The motion was seconded by Dr. A. J. Bedell, New York, and carried.

Dr. Wescott read the following resolution from the Section on Ophthalmology having to do with physical standards for drivers of motor vehicles, and moved its adoption, which was duly seconded and carried:

WHEREAS, The report of the Committee on Physical Standards for Drivers of Motor Vehicles of the Section on Ophthalmology, signed by Conrad Berens, William C. Finnoff, Harry S. Gradle and William Campbell Posey, has been unanimously adopted by this section and by the Section on Preventive and Industrial Medicine and Public Health; therefore, be it

Resolved, That the House of Delegates endorse the said report on Physical Standards for Drivers of Motor Vehicles.

REPORT OF THE COMMITTEE ON PHYSICAL STANDARDS FOR DRIVERS OF MOTOR VEHICLES

Every individual driving a motor vehicle, private, public or commercial, of the self-propelled type (automotive) shall be required to present to the motor licensing board in each state a certificate from a reputable physician (the standard of such medical fitness shall be licensure to practice medicine or surgery) in which the following points are certified:

VISUAL STANDARDS

The applicant has vision of at least 20/50 in one eye and vision of at least 20/100 in the other eye, with or without glasses. Applicants with less vision than 20/100 in the poorer eye may, under certain conditions, be qualified by a special or county board (see below).

Double vision shall disqualify.

Such certificates shall be made on a regular form furnished by the motor board, and, on licensing of the applicant by the board, the applicant shall be furnished with a driving certificate that shall at all times be available for inspection.

Examiners shall be recompensed by a fee paid by each applicant, the amount of such fee being determined by the motor boards in each state.

The license must be renewed every year, but the medical certificate must be made anew every three years, provided the applicant makes a sworn statement each intervening year that, to the best of his or her knowledge, there has been no change in his or her physical condition, so far as the certificate applies, since the time of the last examination.

SPECIAL OR COUNTY BOARDS OF PHYSICAL LICENSURE

In each state there shall be a board of physical licensure in each county, or one for several counties, consisting of two general practitioners or surgeons and one ophthalmologist, which shall meet at stated intervals and have final decision in all cases. These boards so constituted shall be empowered (1) to examine all persons applying to them for a physical license; (2) to pass on the fitness of candidates regarding whose qualifications any individual examiner may be in doubt, and (3) may, under certain conditions, qualify candidates who lack the visual requirements specified above; viz., applicants with a lower standard of vision than 20/100 in the poorer eye may be qualified by them provided that the vision in the best eye is at least 20/30, with or without the aid of glasses, and the field of vision is normal, that hearing is efficient, and that the applicant is fully capacitated in all other respects physically, and alert mentally. In such cases applicants with one eye partially or wholly blind, or even entirely absent, may be qualified.

These boards shall be appointed by the governor and shall be recompensed either by a fee paid by the applicants who may appear before them, or they shall be salaried officers directly connected with the department in each state controlling the granting of motor licenses.

Resolutions from Section on Laryngology, Otology and Rhinology

Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology, presented the following resolution from that section:

Resolved, That the thanks of the House of Delegates of the American Medical Association be tendered to the Honorable George Wharton Pepper, United States Senator from Pennsylvania, and to Hon. W. W. Griest, Representative in Congress from Pennsylvania, for their efforts to procure enactment of legislation to safeguard the people from injury from the unguarded sale of concentrated lye and other caustics in interstate commerce.

Dr. Shurly moved the adoption of the resolution, which was seconded by Dr. A. E. Bulson, Jr., Indiana, and carried.

Dr. Shurly also presented a resolution from the Section on Laryngology, Otology and Rhinology having to do with the American Federation of Organizations for the Hard of Hearing, and moved its adoption, which was seconded and carried. The resolution was as follows:

In view of the magnificent work being done by the American Federation of Organizations for the Hard of Hearing, be it

Resolved, By the Section on Laryngology, Otology and Rhinology that it endorses the work of the American Federation of Organizations for the Hard of Hearing and commends it to the favorable consideration of all physicians and the public.

Resolved, That a copy of this resolution be sent to the House of Delegates of the American Medical Association for its endorsement.

Resolutions from Section on Diseases of Children

Dr. I. A. Abt, Section on Diseases of Children, presented a committee report from that section on infant feeding and infant foods, and a resolution on internships in children's hospitals, as follows:

REPORT OF COMMITTEE ON INFANT FEEDING AND INFANT FOODS

A committee, appointed by the Section on Diseases of Children of the American Medical Association, at the annual session of 1924, has made an investigation concerning methods

of sale, advertising methods and indications and contraindications for the use of proprietary infant foods.

1. The committee finds that it is impracticable at the present time to attempt to dispense entirely with all proprietary foods.

2. It is necessary for the protection of infants to formulate a definite program for the control of the method of advertising in all medical journals and in all periodicals, and especially in those that uphold high ethical standards.

3. This problem is best attacked at its source, which consists of the education of the medical student in simplified methods of infant feeding. This the committee believes is the fundamental problem.

4. There should be an increased propaganda among physicians and in lay journals to increase knowledge about breast feeding. Such a propaganda will include the dangers of artificial feeding of infants, particularly when carried on without the supervision of medical men.

5. There is a disposition on the part of many manufacturers of proprietary foods to cooperate with the medical profession and its medical journals. The committee believes that much good may be accomplished by a better understanding and cooperation between these manufacturers and representatives of the American Medical Association.

The committee recommends that the American Medical Association appoint a proper committee or representative to continue this work in line with the recommendations suggested in this report.

RESOLUTION ON INTERNSHIPS IN CHILDREN'S HOSPITALS

WHEREAS, Children's hospitals are classed by the Council on Medical Education and Hospitals as special hospitals, internship in which does not qualify the intern for the requirement of the fifth, or hospital, year; and

WHEREAS, Many children's hospitals give a well rounded course in medical and surgical conditions common to both children and adults, as well as in diseases peculiar to children which are not seen in general hospitals, though they are defective in obstetrics and gynecology, and

WHEREAS, This classification tends to aggravate the already considerable difficulty experienced in securing competent interns for children's hospitals, be it

Resolved, That the Council on Medical Education and Hospitals be requested to grade and classify children's hospitals on the basis of the general experience offered interns and make such additional regulations as may make these hospitals grade as suitable places for intern training when minimum additional training in other institutions is added.

Dr. Abt moved adoption of the report and the resolution, and the motions respectively were duly seconded and carried.

Resolution from Section on Pathology and Physiology

Dr. J. J. Moore, Section on Pathology and Physiology, presented the following resolution from that section, regarding the establishment of a publication in the field of pathology and physiology:

Resolved, That it is the sense of the Section on Pathology and Physiology that a periodical devoted to publications in the field of pathology be established. This section respectfully requests that this matter be given proper consideration by the House of Delegates with a view toward the establishment of such a journal under the auspices of the American Medical Association.

The Speaker referred this resolution to the Board of Trustees for consideration and action.

Resolution from Section on Preventive and Industrial Medicine and Public Health

The Secretary read the following resolution from the Section on Preventive and Industrial Medicine and Public Health relative to the death of Dr. Samuel T. Darling:

WHEREAS, The tragic death, May 20, 1925, of Dr. Samuel T. Darling, in an automobile accident near Beirut, Syria, where he was making a malaria survey at the request of the Health Section of the League of Nations, has cut short the brilliant and active scientific career of one of the foremost malariologists of the world, and one of America's greatest scientists, causing inestimable loss to the advancement of the practical application of medical science to the solution of some of the great economic problems of mankind, and

WHEREAS, We, as a scientific body, recognize and appreciate the fundamental breadth of Dr. Darling's knowledge, the extent of his experience and the brilliance of his scientific achievements, and, as individuals, feel keenly the loss of his stimulating, kindly, critical judgment, and his charming personality, be it, therefore,

Resolved, That the members of the Section on Preventive and Industrial Medicine and Public Health of the American Medical Association express their heartfelt regret because of Dr. Darling's untimely death, their deep and sincere appreciation of his life, and their admiration for his scientific achievements, and that a copy of this resolution be spread upon the minutes of the Association, and that a copy be transmitted to Mrs. Darling.

On motion of Dr. W. H. Seemann, Louisiana, duly seconded and carried, the resolution was adopted.

Supplementary Report of Reference Committee on Medical Education

Dr. G. E. Follansbee, Ohio, presented a supplementary report of the Reference Committee on Medical Education, the first portion of it dealing with the increase of the Council to seven members:

The Council on Medical Education and Hospitals has submitted the following recommendation:

We recommend to the House of Delegates that the membership of the Council be increased to seven members or not more than nine, the term of office to remain at five years as at present, and that no more than two new members be appointed in any one year, except in the filling of any unexpired term.

The Council also presents the following petition:

The Council on Medical Education and Hospitals respectfully asks the Board of Trustees for an additional grant of $15,000 annually in order that the executive staff of the Council can be increased and that better salaries be paid, so that the work of the Council can be more effectively carried on.

Your committee is informed that the Council has at the present time some important matters for investigation and consideration that will require a larger office force to carry out successfully. These matters are of sufficient importance so that the Council should not be hampered in its work, and the committee recommends that the Council be increased to seven members as suggested, and refers to the Board of Trustees the petition for a grant of $15,000 additional annually with its approval.

On motion of Dr. Follansbee, seconded by Dr. Irvin Abell, Kentucky, that portion of the report was adopted.

The resolution by Dr. Donald Macrae, Jr., Iowa, on postgraduate schools and laboratories, calls attention to a disgraceful condition which to a limited degree still exists, but has to a large extent been corrected by the activities of the Council on Medical Education and Hospitals. This resolution, amended by the committee, is as follows:

WHEREAS, Certain so-called short course postgraduate schools and laboratories are advertising two and three weeks' training as sufficient to produce a product capable of performing any major operation, and

WHEREAS, Men of prominence and power are innocently or otherwise lending their names to add stability to these institutions, be it

Resolved, That in the opinion of the members of the American Medical Association the indiscriminate organization and unscientific course, commercial, postgraduate schools or laboratories admitting untrained students are bringing disgrace upon the surgical profession and are decidedly detrimental to the general public, and that the American Medical Association through the proper offices call attention of all state and county societies to the danger of these institutions and urge upon the two latter to advise their members of the necessity of withdrawing their support from this or any other scheme affecting the high standards of the medical profession.

Your committee is aware that there are still so-called postgraduate schools operated by groups of doctors for the sole purpose of placing in the possession of their "graduates" documents for exhibition to prospective patients that will inspire unwarranted confidence in the ability of the possessor, such documents being sold at an exorbitant price, but one which it is apparent is satisfactory to the purchaser.

It is deplorable and disgraceful that there are some prominent members of the profession actively connected with the so-called schools and a larger number willing (for what reason cannot be imagined) to lend the influence of their names as consultants or directors. No professional condemnation can be too strong to apply to those men willing to prostitute the noble, altruistic profession of medicine by assisting for pay the known, grossly incompetent, unscrupulous practitioner to prey upon a trusting public under the disguise of surgery.

Although condemning without restraint the laboratory or institution which pretends to fit the totally inexperienced in from two to four weeks to practice major surgery and which issues a certificate or diploma to this effect, your committee

recognizes that there is a large and legitimate field for the teaching and practicing of surgical technic along special lines, by surgeons competent to give such instruction. As the ability of the growing surgeon increases, there should be some place where he can familiarize himself with the technic of advanced operating which he is desirous of doing. Such laboratory, honestly conducted and with no false pretenses nor documents issued for advertising purposes, should be commended and supported as those previously mentioned should be condemned.

Your committee heartily endorses the resolution.

This portion of the committee's report was adopted. On motion of Dr. Follansbee, seconded by Dr. H. M. Brown, Wisconsin, the report as a whole was adopted.

Supplementary Report of Reference Committee on Hygiene and Public Health

The Reference Committee on Hygiene and Public Health submitted a supplementary report through its chairman, Dr. J. W. VanDerslice, Illinois, which dealt with a resolution submitted to the committee by Dr. Brown of Wisconsin:

WHEREAS, The legislatures in several states have enacted legislation relative to the teaching of scientific theories and facts in their educational institutions; and

WHEREAS, Legal procedure is now in process in the state of Tennessee to determine the right of the legislative body thus to inhibit the dissemination of scientific knowledge; and

WHEREAS, A study of the development of mankind ethnologically, embryologically and anthropologically is fundamental to the proper comprehension of scientific medicine; therefore, be it

Resolved, By the House of Delegates of the American Medical Association that any restrictions on the proper study of scientific fact and theory in regularly established scientific institutions be considered inimical to the progress of science and to the public welfare.

The committee's report was adopted.

Supplementary Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. E. L. Hunt, New York, submitted a report from the Reference Committee on Amendments to the Constitution and By-Laws.

Your committee recommends the adoption of the following amendment to the By-Laws:

Amend Section 3, Chapter I, by substituting "1925" for "1903" in the second line of that section, so that the first sentence of Section 3, Chapter I, of the By-Laws shall read:

"At the annual session of 1925 and every third year thereafter, the House of Delegates shall appoint a committee of five on reapportionment, of which the Speaker and the Secretary shall be members."

Your committee recommends the adoption of the following proposed amendment to Section 1, Chapter VIII, of the By-Laws, this being changed so that the membership of the Council on Medical Education and Hospitals can be increased from five to seven members, the term of office for each member being seven years. The first portion of Section 1, Chapter VIII, of the By-Laws, as thus amended, will then read as follows:

The standing committees and councils, including the Judicial Council and the Council on Scientific Assembly, shall consist of five members, each elected for five years. The Council on Medical Education and Hospitals shall consist of seven members, each elected for seven years. The term of office of the members of each committee shall terminate in succession, one each year, and the House of Delegates shall elect annually, on nomination by the President, one member to each committee to fill the vacancy, except that, in 1925, three members of the Council on Medical Education and Hospitals shall be elected by the House of Delegates.

The Secretary suggested that the House of Delegates should delegate to the Council on Medical Education and Hospitals or to the Board of Trustees authority to fix terms of members of the Council under the amended By-Laws. On motion, duly seconded and carried, the Board of Trustees was instructed to fix the terms of members of the Council on Medical Education and Hospitals.

On motion of Dr. Hunt, duly seconded and carried, the report as a whole was adopted.

Dr. Hunt also gave notice of a proposed amendment to the Constitution dealing with giving recognition to the lay secretaries of state societies in order that they might have some standing in the American Medical Association meetings.

Report of Reference Committee on Reports of Officers

Dr. A. E. Bulson, Jr., Indiana, read the report of the Reference Committee on Reports of Officers:

Your committee desires to endorse most highly the suggestions and recommendations of President Pusey, and, in connection therewith, offers the following resolution:

Resolved, That, in the interests of a more intimate relationship between this Association and its constituent societies, and to promote a greater amount of cooperation and helpfulness to one another, it is the sense of this House that the officers of this Association should accept, as far as possible, invitations to attend meetings of the constituent societies.

Your committee also endorses the suggestion of President Pusey that the House should adopt a plan whereby more thorough consideration may be given to important measures before they are acted on finally by the House. The various councils of the Association are deliberative bodies, but the policies recommended by them should be considered carefully by reference committees before being accepted by this House. Your committee, therefore, offers the following resolution:

Resolved, That all reports of officers, Councils or standing committees of this Association, and all resolutions dealing with questions of policy of the Association, shall be filed with the Secretary of the Association sixty days in advance of the annual session of this House, published in the *Bulletin*, and mailed to every delegate at least thirty days before the annual session at which such resolutions or reports are to be considered.

Your committee sees no urgent reason to change the character of membership of certain councils and bureaus or reference committees, inasmuch as the ex-officio members have only the privilege of discussion and not of voting.

Your committee endorses the recommendation of President Pusey to increase the membership of some of the councils, and is informed that resolutions covering this matter already have been introduced to this House.

Concerning the address of the Speaker of the House, your committee not only approves but recommends the appointment of reference committees in advance of the annual session at which such committees are to serve, and offers the following resolution:

Resolved, That the members of reference committees of this House be appointed at least thirty days in advance of the annual session at which they are to serve, that they be notified by mail concerning such appointment, and that they in turn signify as accurately as possible intention as to attendance so that in case of failure to serve the vacancies may be filled immediately by the Speaker of the House.

Concerning the selection and election of a Secretary to the Board of Trustees, your committee believes that the matter can be left to the Board of Trustees, but subject to the approval of this House, and so recommends.

Your committee endorses most highly the suggestion of the Speaker that this Association not only shall continue but shall increase its activities in educating the public concerning the aims, objects and ideals of organized medicine, and to disseminate helpful knowledge in preventing the public from being the victims of quackery and medical frauds.

Your committee endorses all of the sentiments expressed by President-Elect Haggard in his address on "Some of the Duties of the Hour for the American Medical Association," and is of the opinion that many of the suggestions made already have been referred to various councils of this Association, which will take active and intelligent action thereon. It, however, desires especially to commend that this Association shall not cease efforts to secure a fundamentally sound law requiring an examination in the elementary branches of physics, chemistry, anatomy, physiology, pathology and diagnosis of every one who undertakes to treat the sick.

Your committee also approves the suggestion of President-Elect Haggard that whenever possible an effort should be put forth by county medical societies to forestall publication in the lay press of information concerning threatened or inaugurated malpractice suits, in an endeavor to break up the altogether too common tendency to attempt to blackmail medical men through fear of the publicity given. However, your committee desires to emphasize the fact that the criticism or uncomplimentary remarks of one of more members of the medical profession concerning the services rendered by a confrère are often a direct or indirect cause of the bringing of malpractice suits, and that our members should be reminded that they should do as they would be done by in the consideration of services of their confrères.

Your committee highly endorses the recommendation of President-Elect Haggard that the immediate goal of the medical profession should be to seek to establish the medical profession in its proper status under the various workmen's compensation laws, and to that end recommends that an attempt be made to secure in all states the status recommended by the National Conference of Physicians and Industries detailed in President-Elect Haggard's address.

Your committee also endorses all that President-Elect Haggard said concerning the medical care of the veteran and the various impositions and inconsistencies that are made possible through the War Veterans' Act of 1924, which has been made the subject of protest by this house, and offers the following resolution:

Resolved, That the American Medical Association, through its accredited representatives and with the assistance of the accredited representatives of constituent organizations, whose cooperation is solicited, put forth every honorable effort to secure an amendment to the Veterans' Act of 1924, which will do away with federal free medical and surgical services and care for all veterans except those whose disabilities have been caused by war service for our country, or at least restrict free medical and surgical services and care to those veterans who are unable to pay for the same.

The report of the Judicial Council already has received appropriate action by this House, and your committee desires to express its unqualified approval of that action, and to reiterate the sentiment expressed in the report, with the following resolution:

Resolved, That it is the sense of this House of Delegates that periodic health examinations should be conducted by medical men and neither dominated by nor controlled by lay organizations, for the reason that the relation between the patient and the physician is an individual matter, and anything that disturbs such relationship is detrimental to the best interests of the patient; and be it further

Resolved, That it is the sense of this House of Delegates that every Fellow and member of the American Medical Association should live up to the spirit and letter of this resolution.

The first section, dealing with the suggestion offered by Dr. Pusey on attendance at constituent society meetings, was adopted. The second section, dealing with the matter of arranging for more consideration to be given to important measures before their presentation in the House, was referred to the Board of Trustees, on motion of Dr. Southgate Leigh, Virginia, after discussion by Dr. Holman Taylor, Texas; Dr. G. F. Keiper, Indiana, and Dr. W. H. Mayer, Pennsylvania.

The portion of the report referring to the appointment of reference committees was adopted.

Dr. A. E. Bulson, Jr., read the remainder of the report, and moved the adoption of the resolution relative to the war veterans, which was seconded and carried. Dr. Bulson also moved the adoption of the portion referring to the report of the Judicial Council and the resolution on periodic health examinations, seconded by Dr. E. C. Ellett, Tennessee, and carried.

On motion of Dr. Allen H. Bunce, Georgia, seconded by Dr. J. D. Brook, Michigan, the portion of the report referring to a Secretary to the Board of Trustees was deleted.

The report as a whole was adopted with the exception of the section referred to the Board of Trustees, and the section referring to the secretary to the Board of Trustees, which was deleted.

The Secretary read the following communication to Dr. Ray Lyman Wilbur regarding equal status for the physicians in the service of the Veterans' Bureau with the medical officers of the Army, the Navy and the U. S. Public Health Service:

UNITED STATES VETERANS' BUREAU, WASHINGTON

May 19, 1925.

Dr. Ray Lyman Wilbur, Chairman,
Medical Council, U. S. Veterans' Bureau,
Stanford University, California.

Dear Doctor Wilbur:

You are requested to note enclosed copies of resolutions adopted by the Medical Officers' Association, U. S. Veterans' Bureau, of the Regional Office at San Francisco at a meeting held May 8, 1925.

The loss of Fellowship in the Americal Medical Association as the result of the change in status of the medical officers of the bureau which occurred coincident with the legislation of June, 1924, is greatly regretted by this office; and in addition to the resolutions submitted, correspondence has been received on the subject from other sections in the field. While many of the physicians employed in the bureau have retained their original membership in the medical societies of their home counties, there are many others who have been forced to give up all connection with their former places of residence. In either case, it is believed that the service rendered by the medical officers of the U. S. Veterans' Bureau should be recognized by the association in the same manner as that rendered by the other government services.

It will be appreciated very highly if you will be so good as to lay this matter before the proper committee of the association. In this connection, it is desired to state that there are at the present time 1,445 full-time medical officers in the employ of the bureau.

For the Director,

B. W. BLACK,
Acting Medical Director.

RESOLUTIONS ADOPTED BY THE MEDICAL OFFICERS' ASSOCIATION

WHEREAS, Official information has been received by one of our members from the Secretary of the American Medical Association informing him that by reason of congressional legislation effective June 7, 1924, the medical personnel of the U. S. Veterans' Bureau automatically ceased to be Fellows of the American Medical Association, and,

WHEREAS, Practically all the U. S. Veterans' Bureau medical personnel heretofore have been accredited Fellows of the American Medical Association, many of them throughout a period of years prior to the Great War, having attained eligibility through membership in county and state societies; others having attained eligibility by virtue of their commissioned status in the Army, Navy or U. S. Public Health Service during and subsequent to the Great War, and,

WHEREAS, The same medical personnel are now serving and having continued to serve uninterruptedly the federal government and its disabled ex-service beneficiaries in precisely the same manner and degree as while commissioned officers of the government, and,

WHEREAS, The only present method whereby the medical personnel of the U. S. Veterans' Bureau may become eligible for Fellowship in the American Medical Association is by affiliating with county and state societies in the manner prescribed for physicians engaged in civilian practice, and,

WHEREAS, Because of the nature of their duties, which holds them at all times subject to change of station, in the public interest, with no certainty of tenure at any fixed station, thereby making it impracticable and unduly expensive to attain membership in county and state societies incident to each change of station, therefore be it

Resolved, By the Medical Officers' Association, U. S. Veterans' Bureau, San Francisco Local, in meeting assembled, that its active members are entitled to equal professional and official recognition accorded by the American Medical Association to commissioned medical officers of other government services on active duty; and be it further

Resolved, That the Medical Director of the U. S. Veterans' Bureau be requested to present these resolutions to the House of Delegates with recommendation for favorable consideration at the next regular meeting of the American Medical Association, May 25 to May 29, 1925.

JUSTUS M. WHEATE, M. D.,
Chairman Executive Committee,
San Francisco Local.

The matter was referred to the Judicial Council for report at the meeting next year.

Dr. J. W. VanDerslice, Illinois, read the following resolution of thanks to the Atlantic City committees, hotels, etc., which was adopted unanimously.

Resolved, That the House of Delegates extend to Atlantic City a vote of thanks for its cordiality and hospitality and that we commend the representatives of the press for their cooperation with officers of the Association in securing for the public an accurate report of our deliberations.

On motion of Dr. George E. Follansbee, Ohio, Chairman of the Special Committee on Constitution and By-Laws, duly seconded, the report of the committee, which had been distributed to the delegates in printed form, was approved. Dr. Follansbee also moved that this constitution and by-laws be recommended to the different state societies as a pattern. There was discussion by Drs. G. F. Keiper, Indiana; Holman Taylor, Texas, and H. M. Brown, Wisconsin. The motion was carried.

A rising vote of appreciation was extended to the Speaker of the House for his able handling of the sessions.

The meeting adjourned sine die at 5:10 o'clock.

THE OPENING GENERAL MEETING

Tuesday Evening, May 26

Some four thousand persons assembled on the ocean end of the Steel Pier to hear the opening general meeting of the Association. After an invocation by REV. THOMAS J. CROSS, pastor of the Chelsea Baptist Church, Atlantic City, Dr. William A. Pusey, President of the Association, presented the chairman of the local committee of arrangements, DR. CLARENCE N. ANDREWS, who said in part:

Address of Dr. Clarence N. Andrews

Mr. President, Officers of the American Medical Association, Visiting Guests, Ladies and Gentlemen:

The Local Committee of Arrangements has done all within its power to make your stay here interesting, pleasant and profitable.

For the visiting ladies, we have tried to provide good, wholesome entertainment.

I wish to avail myself of this opportunity to thank every member of the Local Committee for its hearty support; to thank Mr. Skean and his staff of the Convention and Publicity Bureau for their great help, and to thank the owners and managers of the beach front hotels for their wonderful support in every way.

Dr. Pusey then introduced DR. L. F. DONOHOE, president of the Medical Society of the State of New Jersey, who said:

Address of Dr. L. F. Donohoe

Mr. President and Fellow Members of the American Medical Association:

As President of the New Jersey State Medical Society, there devolves on me the very pleasant privilege of welcoming the representative organization of the physicians of this country. We are glad to have you come to New Jersey, and of all the places in this state, I think no location could have been more appropriately selected for such a meeting than this great health resort.

It may be of interest to you to know that the New Jersey State Society is the oldest medical society in America and is this year celebrating its one hundred and fifty-ninth anniversary. We feel it a great honor, indeed, to welcome today this great national association, which three quarters of a century ago we adopted as our mother organization.

The New Jersey State Medical Society has always endeavored to help in that coordination of the medical profession at which the American Medical Association was aiming. Such coordination has proved a vitally constructive factor in the improvement of the medical status of the physician and in uplifting the practice of medicine in the United States.

May I recall to your attention that, when on May 5, 1846, the preliminary meeting for the organization of a national medical association was held, New Jersey was one of the sixteen states that sent representatives. These representatives took a prominent part in bringing about that union of the profession throughout the country which has done so much good.

What else can I say, unless I add our old Gaelic expression of good will, "You have our hundred thousand welcomes." We shall be glad to have you return on many subsequent occasions so as to know this great state of New Jersey and its health resources better and to become well acquainted with its medical profession. We will also be delighted to have you attend our annual meeting, June 18-20, at Atlantic City, and help us celebrate our one hundred and fifty-ninth anniversary.

Officers of the American Medical Association, fellow physicians of the United States, you are heartily welcome.

Address of Dr. D. Ward Scanlan

DR. D. WARD SCANLAN, president of the Atlantic County Medical Society, then welcomed the visitors, saying in part:

Mr. President, Distinguished Guests, and Fellow Members of the American Medical Association:

The members of the Atlantic County Medical Society most heartily welcome you to Atlantic County and Atlantic City.

The physicians of this county society, and particularly the members practicing medicine and surgery, in its various special branches, are benefited by the opportunities this convention within our doors offers. You doctors of medicine send your patients to this island of sunshine and sea air, to be rejuvenated and returned to vigor of mind and robustness of body.

You come yourselves, and your healthy acquaintances and friends come, not always to convalesce, thank God, but to rest your fatigued souls and bodies, and after such, a too short vacation, you return to your work, physically able to obey the commands of your severe conscience, that severely strict conscience characteristic of the physician, the world over.

We Atlantic City physicians continually administer to the visitors. You are the commanding officers at home, when these persons find they are at war with disease. You are, in a certain sense, our competitors. The visitors to our shores can and do obtain the best medical skill obtainable. You are their choice outside this city. If we of this city succeed in the care of your patients while here, we must keep ourselves well informed and trained up to the minute. We must be nearly as good as you are. This convention gives us the mutual opportunity to meet.

And fellow members of the American Medical Association, and honored guests, while you are here teaching and being taught, we members of the Atlantic County Society are ready to serve you, no matter what might be the inconvenience to ourselves, or how humble the service.

Dr. Pusey then introduced the foreign visitors, including MR. J. BASIL HALL, president of the British Medical Association, and DR. T. C. ROUTLEY, secretary of the Canadian Medical Association. Following the address of President William D. Haggard, Dr. Pusey introduced Dr. Hubert Work, Secretary of the Interior.

REGISTRATION AT ATLANTIC CITY

The total registration at the Atlantic City Session was 4,861. Below are given two summaries, one by sections and one by states:

REGISTRATION BY SECTIONS

Practice of Medicine	1,449
Surgery, General and Abdominal	797
Obstetrics, Gynecology and Abdominal Surgery	293
Ophthalmology	333
Laryngology, Otology and Rhinology	421
Diseases of Children	279
Pharmacology and Therapeutics	38
Pathology and Physiology	98
Stomatology	34
Nervous and Mental Diseases	123
Dermatology and Syphilology	148
Preventive and Industrial Medicine and Public Health	165
Urology	162
Orthopedic Surgery	110
Gastro-Enterology and Proctology	184
More than one section, or no section indicated	170
Miscellaneous	57
Total	4,861

REGISTRATION BY STATES

Alabama	19	New Hampshire	6
Arizona	3	New Jersey	422
Arkansas	6	New Mexico	1
California	57	New York	803
Colorado	34	North Carolina	61
Connecticut	114	North Dakota	6
Delaware	23	Ohio	317
District of Columbia	110	Oklahoma	13
Florida	28	Oregon	15
Georgia	32	Pennsylvania	1,240
Idaho	2	Rhode Island	25
Illinois	208	South Carolina	22
Indiana	77	South Dakota	3
Iowa	37	Tennessee	51
Kansas	11	Texas	50
Kentucky	30	Utah	9
Louisiana	30	Vermont	10
Maine	12	Virginia	96
Maryland	154	Washington	21
Massachusetts	197	West Virginia	68
Michigan	152	Wisconsin	38
Minnesota	47	Wyoming	1
Mississippi	14	Total in States	4,775
Missouri	73	Miscellaneous	54
Montana	6	Canada	36
Nebraska	20		
Nevada	1	Total	4,861

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SATURDAY, JUNE 6, 1925

THE ATLANTIC CITY SESSION

With almost five thousand physicians regularly registered, the Atlantic City session was one of the most successful ever held by the American Medical Association. The sessions of the House of Delegates were marked by unusual harmony and accord, indicating united effort on the part of the delegates for the common good. The recognition of the scientific work of the Association by the medical profession and by the public indicates that medicine stands in higher repute today than ever before in its history.

The accommodations at Atlantic City, as might have been expected, were good, and every physician was able to secure a satisfactory room. The weather throughout the week was well-nigh perfect, so that visitors were able to avail themselves of the pleasurable features of the seaside city. A slight coolness of the atmosphere interfered somewhat with sea bathing, but the section programs and the exhibits were sufficient attraction more than to offset this slight deficiency. The registration and the technical exhibits were housed on the Steel Pier. Special arrangements had been made for decorating the exhibits and for providing comfortable seating arrangements so that all could be viewed with a minimum expenditure of effort. The motion-picture show was featured by several extraordinary films never before shown, and by a demonstration of the use of the most modern telephone picture and public address devices for conveying electrocardiographic and stethographic pictures and heart sounds. This feature attracted sufficient interest to receive first page notice in practically every large newspaper in the country. The Scientific Exhibit was marked by an unusual demonstration arranged through the Section on Dermatology and Syphilology. Here the effects of syphilis were shown graphically by a cooperative arrangement of several well known clinics. The special exhibits on diseases of the heart and the demonstrations of fresh pathologic specimens likewise attracted wide notice.

The demonstration of the work of the headquarters office brought to the attention of visiting physicians the educational efforts of the various councils and bureaus. Particularly wide publicity was given to the work of the Bureau of Investigation in disseminating knowledge regarding alcoholic nostrums.

The programs of the sections contained papers on such new topics as the prevention and treatment of scarlet fever by the use of toxins and antitoxins, the demonstration of the gallbladder through the injection of specific substances, and a complete symposium on the physiology and pathology of the liver. The new Section on Radiology was attended by numbers which crowded the capacity of its hall and left no doubt as to the importance of this specialty in the science of medicine.

The social features of the session, including the special banquets by various affiliated societies, the President's reception, the meetings of the Woman's Auxiliary, and the Opening General Meeting were attractive and attended by many guests. Arrangements had been made to broadcast the Opening General Meeting, and the address of Dr. Haggard, planned particularly for the public, was heard with great interest and benefit to the medical profession throughout the country.

ORGANIC CHEMISTRY AND MEDICINE

In his presidential address before the Congress of American Physicians and Surgeons at Washington last month, William J. Mayo [1] paid fitting tribute to the outstanding contributions of the pure sciences to the progress of medicine. The theme warrants reiteration, particularly at those periods when there is impatience at the rate of advancement and discovery in fields of scientific endeavor from which medicine has been accustomed to reap a harvest. Some have, indeed, expressed concern lest current devotion to pure science shall deprive medicine of the wisdom to gage the practical value of new knowledge and apply it carefully, which is the outstanding characteristic of a successful clinician. Dr. Mayo has taken his audience into what may previously have seemed to some as extreme byways rather than the commonly frequented paths of scientific achievement and endeavor; yet even the most hidden recesses are shown now and then to reveal something of unexpected practical value.

Amid the abundance of illustrations which Dr. Mayo offered, the merits of organic chemistry received rather scanty notice; this is emphasized the more because in the study of thyroxin the laboratories of the Mayo Clinic themselves have made one of the most brilliant contributions that the application of organic chemistry to physiology has furnished in recent years. A few years ago it was bacteriology that raised itself on a dominating pinnacle that overlooked the older sciences. More recently, the glamour of the newer developments of physical chemistry and often vague

1. Mayo, W. J.: Contributions of Pure Science to Progressive Medicine, J. A. M. A. 84: 1466 (May 16) 1925.

but enticing claims of colloid chemistry have been allowed to dim the important place occupied by organic chemistry in relation to medicine. This is characteristically reflected in Sinclair Lewis' interpretative novel "Arrowsmith," in which the eminent bacteriologist Professor Gottlieb, replying to the young medical student's appeal to be taken into the courses of the fictitious scientist on the plea of the young man's extensive preparation in organic chemistry, remarks:

> Organic chemistry! Puzzle chemistry! Drug-store chemistry! Physical chemistry is power, it is exactness, it is life. But organic chemistry—that is a trade for pot-washers.

The present-day enthusiasm for the phenomena of molecular surfaces and electric charges of ultramicroscopic particles, of ions, electrons and protons, should not be allowed to distort unduly the rôle that the organic chemist has filled and must continue to undertake in the furtherance of medicine. In the synthesis of new compounds, he has enriched therapy a hundredfold. Anodynes, anesthetics, antiseptics to fill an enormous number of specifications have been prepared by his magic, until in the brief span of half a century the pharmacopeia has been revolutionized. The discovery and identification of hormones and vitamins, of toxins and antibodies, depends on the skill of the organic chemist. And, above all, we must rely on his methods and his insight to disclose the subtle chemical processes that underlie and direct the manifestations of metabolism. No one has helped more than the organic chemist to bring life effectively within the range of scientific understanding and to make its processes in both health and disease more readily fathomed in their material relationships.

THE SECRETIN THEORY OF PANCREATIC SECRETION

The so-called secretin theory of the mechanism regulating pancreatic secretion is based on a number of striking experiments that have originated in the laboratories of physiology: Acid chyme enters the upper part of the small intestine; its hydrochloric acid comes in contact with the surface of cells that form the intestinal lining; these cells then produce secretin and throw it off into the blood circulating through the walls of the intestine; the blood distributes it to all parts of the body, but the pancreatic cells are specifically excited by it.[1] The outstanding feature in this sequence of events leading to the discharge of pancreatic juice into the duodenum is the postulated appearance of acid in the upper reaches of this part of the intestine. Through the development of technic for examining the intestinal contents of man by the use of the duodenal tube, it has become possible to examine the current hypothesis not only in animals but also in the human species, and to ascertain with considerable accuracy whether the gastric chyme in fact renders the duodenal contents relatively highly acid in reaction.

According to the recent observations of McClure and his co-workers[2] at the Evans Memorial in Boston, the current views require substantial revision. They show that even the extreme proximal portion of the duodenum was never more than faintly acid after the stimulation of the pancreas had been established. These findings indicate that the rôle of acidity in maintaining the secretion of pancreatic juice would seem to be inconsequential. Gastric chyme, the Boston investigators insist, is neutralized, either completely or nearly so, immediately on leaving the stomach and in such manner that the duodenum is never more than faintly acid under normal conditions of eating. This negatives a most essential premise of the "secretin" theory.

It might seem as though in removing this prop from beneath the current teachings the physiologists were deprived of a tenable explanation of pancreatic secretion. Recently secured evidence indicates, however, that products of digestion will stimulate this function when they are placed in the duodenum. Furthermore, McClure and Wetmore[3] have found that pure fat stimulated a greater flow of pancreatic juice than did either pure protein or carbohydrate, and that foodstuffs stimulated a greater flow than did water or acid. These differences noted in the stimulating properties of various substances, they assert, would not be expected to occur if a nervous mechanism were the principal factor that stimulated the pancreas under usual conditions. This deduction, together with the findings that intravenously injected substances and digestion products placed in the duodenum stimulate the pancreas, suggests to McClure and Wetmore that the absorption of products of food digestion is usually the essential factor in stimulating the secretion of pancreatic juice.

That gastric acidity is not required for promoting pancreatic secretion follows further from observations on a patient with achylia gastrica in whom acid, alkaline or neutral foods produced comparable stimulating effects on the pancreas. THE JOURNAL has referred previously to the fact that the so-called "acid control of the pylorus," long cited in the usual explanation of the function of the pyloric sphincter, has been seriously questioned on the basis alike of recent experiments on animals and on man.[4] The pylorus is a highly important anatomic region from the standpoint of the clinician's interest. It is therefore imperative that our knowledge about it shall be as accurate as can be devised by current methods of study.

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1. Mitchell, P. H.: General Physiology, New York, McGraw-Hill Book Company, 1923, p. 479.

2. McClure, C. W.; Montague, O. C., and Campbell, L. L.: Studies on the Mechanism of External Pancreatic Secretion, Boston M. & S. J. **192**: 527 (March 19) 1925.

3. McClure, C. W., and Wetmore, A. S.: Boston M. & S. J. **187**: 882 (Dec. 14) 1922.

4. The Acid Reflex of the Pylorus, editorial, J. A. M. A. **82**: 1784 (May 31) 1924.

CONCENTRATION OF BILE IN RELATION TO ITS STORAGE IN THE GALLBLADDER

Among the explanations that have been advanced with regard to the functions of the gallbladder, the so-called "reservoir theory" is probably the most popular. During the active digestive processes, bile is poured into the intestine almost as fast as it is secreted. This is not true during the quiescent periods of alimentation; but as the production of the fluid nevertheless continues in the liver, the bile must be disposed of in another way. This occurs through its storage in the gallbladder. Mann[1] has pointed out why this organ cannot function as a reservoir in the same sense as that in which the urinary bladder functions. In the first place, the capacity of the gallbladder in relation to the amount of bile secreted is too small, being about one to forty in man. From the results of experiments on various species of animals, Mann has estimated that the capacity of the gallbladder is usually less than the amount of bile secreted in half an hour. Secondly, the propulsive power of the gallbladder is not sufficient to empty it quickly.

The seeming discrepancies between bladder storage capacity and the volume production of the bile have become reconcilable by the discovery that the gallbladder is the seat of rapid absorption of water whereby the bile becomes markedly concentrated. It has been found, for example, that the pigment content of the fluid in the gallbladder may be ten times greater than that of bile secreted directly from the liver. Confirmation of this storage function has been secured recently at the Mayo Foundation.[2] Following ligation of the common bile duct, signs of icterus, that is, bile pigment in the urine, plasma, sclerotics and mucous membranes, do not develop for from thirty-six to forty-eight hours after operation. If the gallbladder is removed when the common duct is ligated, the urine and plasma contain definite amounts of bile pigment within from three to six hours after operation, and the sclerotics and mucous membranes are definitely yellow within twenty-four hours. The difference in the rate of accumulation of bile pigment is considered as evidence of the ability of the gallbladder to concentrate the bile secreted by the liver. Moreover, if the gallbladder is severely injured, the same rapid accumulation of pigment follows ligation of the common duct. The time of appearance and rate of development of bile pigment in the blood and urine of these animals following ligation of the common bile duct depends on the degree of involvement of the gallbladder by this acute process. In animals in which the whole gallbladder seemed diseased, jaundice developed as rapidly as in animals in which the gallbladder was removed, and the common bile duct ligated similarly. Animals having milder disease of the gallbladder developed jaundice less rapidly, and animals with slight or no apparent disease developed jaundice at the same rate as normal animals following ligation of the common bile duct. According to the Rochester physiologists, these facts clearly demonstrate that the function of the gallbladder in concentrating the bile is impaired, or may be totally lost, in the presence of an acute inflammatory process in the gallbladder.

1. Mann, F. C.: The Functions of the Gallbladder, Physiol. Rev. **4**: 251 (April) 1924.
2. Mann, F. C., and Bollmann, J. L.: The Relation of the Gall Bladder to the Development of Jaundice Following Obstruction of the Common Bile Duct, J. Lab. & Clin. Med. **10**: 540 (April) 1925. Bollmann, J. L.; Mann, F. C., and DePage, P.: The Effect of Specific Cholecystitis on the Bile-Concentrating Activity of the Gall Bladder, J. Lab. & Clin. Med. **10**: 544 (April) 1925.

Current Comment

A NEW ASPECT OF TOOTH DEVELOPMENT

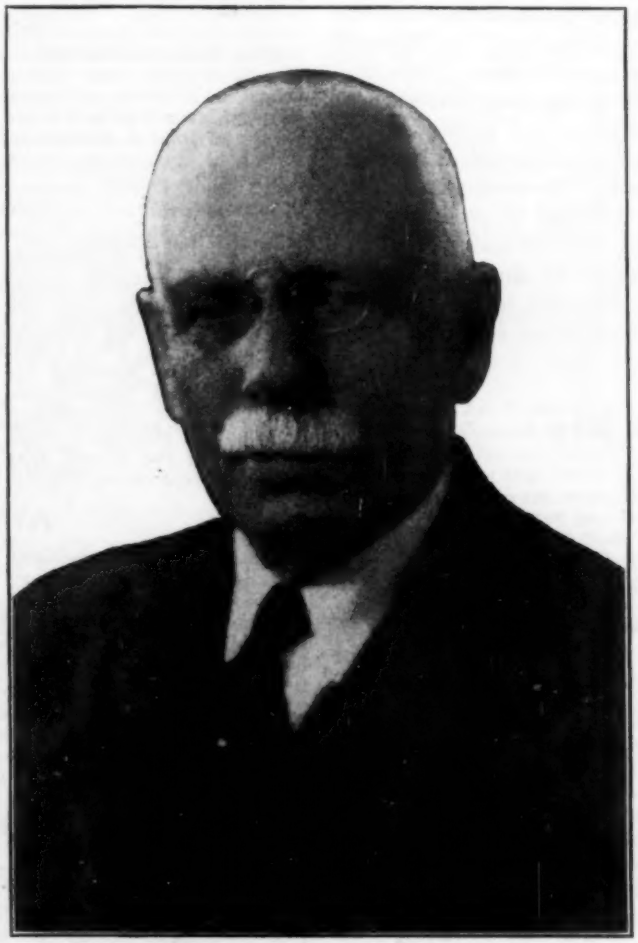
Defective teeth, like baldness and constipation, are among the abnormalities of human structure and function that the hereditary or acquired conditions of our modern civilization seem to have fostered. Hundreds of pages have been written about the assumed causes of deterioration of the teeth, but for the most part the statements and hypotheses lack the features of rigorous proof that alone satisfy the curiosity of a scientifically minded person. At present the pendulum of opinion seems to swing between the claims of oral hygiene and appropriate diet, respectively, in the search for the sources of detriment. In either extreme, the lack of something is charged with responsibility for the dental damages. Thus, on the one hand, we are told that decay results from inadequate tooth cleanliness; and, on the other, the suggestion is ventured that the lack of some essential in the diet, such as calcium or some vitamin that promotes its deposition in osseous structure, is the primary cause of abnormalities in the teeth. Recently a somewhat different interpretation of such conditions has become justified by observations of the injurious effects of undue quantities of certain elements in the diet.[1] The inclusion of small amounts of fluorids in the diet, for experimental rats, has led to abnormalities in the structure and hardness of their teeth. Sometimes the latter have grown into abnormal positions and have shown unusual susceptibility to attrition. The quantities of fluorin that led to such an outcome were not sufficient to interfere seriously with the usual development of the animal. The point justly emphasized by the observers is, however, that nutrition investigations have dealt in most instances with the effects of deprivation, complete or partial, of some indispensable nutrient. The cause of defective structure and of low resistance to external agencies, which result in injury to the teeth, has frequently been attributed to deficiency of one kind or another in the food supply. The new study shows, on the other hand, that overingestion of an element that is regularly found in both food and tissues in small amounts may exert a detrimental effect when the amount ingested is increased to but little more than certain samples of foods are known to contain. This is a positive effect of significance in bone and tooth structure. Fluorin is known, in larger dosage, as an out-

1. McCollum, E. V.; Simmonds, Nina; and Becker, J. E.: The Effect of Additions of Fluorin to the Diet of the Rat on the Quality of the Teeth, J. Biol. Chem. **63**: 553 (April) 1925.

spoken poison; on the other hand, the presence of the element is reported by all analysts as characteristic of teeth and bones, and its widespread distribution in nature makes exclusion of fluorid from the diet almost impossible in any practical way. Evidently there are limitations to the tolerance of even this ubiquitous element.

THE PRESIDENT-ELECT

The election of Dr. Wendell Christopher Phillips of New York to the presidency of the American Medical Association is a recognition of many years of service to organized medicine and of seven years of exceptional service as a trustee. During his trusteeship, Dr. Phillips was for part of the time chairman of the board, and for several years a member of the Executive Committee. In addition to attending the regular sessions of the board, he journeyed from New York to Chicago each month, giving several days of his time to the business of the Association. He was also a member of the House of Delegates of the Association for six years, 1912-1917. Dr. Phillips was born in Hammond, N. Y., June 9, 1859. He is the son of Samuel and Mary (Merrill) Phillips, was educated at Potsdam (N. Y.) Normal School, 1876-1879, and received his degree in medicine from the University Medical College of New York University in 1882. He devoted himself promptly to diseases of the ear, nose and throat, becoming consulting aural surgeon to the New York Postgraduate and Flushing hospitals, and aural surgeon to the Manhattan Eye and Ear Hospital. Dr. Phillips is a member of the American and of the New York otolaryngologic societies, and was president of the American Laryngological, Rhinological and Otological Society in 1907. He is also a member of the New York Academy of Medicine, and was president of the Medical Society of the State of New York in 1912. He has contributed widely to the subject of otology in medical literature, including a book, "Diseases of the Ear, Nose and Throat, Medical and Surgical," which is used as a textbook in many leading medical colleges. The social mindedness of Dr. Phillips is indicated by the fact that he was instrumental in organizing the American Federation of Organizations for the Hard of Hearing, which has done much for promoting the study of lip reading by the deaf and in making easier their lot. The personal popularity of Dr. Phillips and his recognized ability as a worker and organizer in scientific medicine indicate that great advancement may be expected during his leadership of the American Medical Association.



WENDELL CHRISTOPHER PHILLIPS, M.D.
PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION

RECENT CHEMOTHERAPEUTIC RESEARCH

The outstanding idea that Ehrlich had in mind in developing his conception of chemotherapy was the discovery of substances maximally toxic for infecting parasitic agents and minimally toxic for the infected host. It has been said that he aimed to shift the center of interest, in pharmacology, from the injured organism to the harmful parasite. The efforts to follow this lead have been numerous, varied and often most persistent. It would be unfair to overlook the progress that has been initiated and to deny that some outstanding successes have been achieved; but there have been unanticipated disappointments and discouragements. It is far from proved that the curative substances necessarily act in virtue of a differential affinity for the parasitic protoplasm. Referring to the chemotherapeutic attacks on trypanosomes, Dale,[1] has pointed out the contrasts between effects in vitro and those in vivo. The phenomena of acquired resistance seem to be specific for the infected host as well as for the infecting strain of parasites and show, at the same time, discrimination between nearly related remedies and community as regards others having no chemical similarity; these phenomena were, and still are, difficult to bring within the scope of any simple type of explanation. The difficulty, Dale adds, has greatly increased during recent years as the methods of chemotherapy have spread to the treatment of other types of infection. The therapeutic processes are complex and undoubtedly provoke unexplained responses or reactions in the infected host. Nevertheless, the hope of securing a true *therapia sterilisans magna* has remained as a stimulus for many earnest endeavors. It is from this standpoint, also,

1. Dale, H. H.: Chemotherapy, Physiol. Rev. 3: 359 (July) 1923.

that we refer to the elaborate report of Young and his confrères [2] at the Johns Hopkins Hospital of attempts to produce an effective germicide for intravenous use. The outcome of several years of their collaborative investigation has been the production and trial of mercurochrome-220 soluble, a substance endowed with many unusual properties. It is too early to evaluate properly the respective merits and disadvantages of the product; perhaps at this stage of its promotion warning as to its possible dangers rather than laudation of its alleged virtues is most essential. Panaceas are proverbially dangerous or futile. Mercurochrome, like several other germicidal drugs destined for intravenous medication, should remain *sub judice* for some time. The various arsenical and mercurial preparations and the diverse dyes giving promise of potency call for vigorous critical analysis and objective consideration. This need not deter us, however, from giving some measure of praise to the persistent endeavor that many workers have exhibited in the face of experimental discouragements and technical difficulties. The synthesis of hundreds of new compounds in the hope of producing one ideal for some therapeutic end calls for energy, zeal and personal effort scarcely betrayed in the final product that may become available. Research is an enervating job; it is also a great gamble in which few win.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

State Medical Election.—At the annual meeting of the state medical association, Yosemite Valley, Dr. Edward N. Ewer, Oakland, was elected president, Dr. William T. McArthur, Los Angeles, president-elect, and Dr. Joseph H. Catton, San Francisco, vice president. Dr. Emma W. Pope, San Francisco, is secretary. The next meeting will be in Oakland.

Sanatoriums Endowed by Dr. Bridge.—The will of the late Dr. Norman Bridge of Pasadena and Chicago provided bequests of $1,000,000 each to the Barlow Sanatorium, Los Angeles, and the La Vina Sanatorium, La Vina. According to the *Bulletin of the National Tuberculosis Association*, both of these sanatoriums are equipped to treat tuberculosis at less than cost.

"Dr." Albrexstondare Lost His Appeal.—Having been found guilty of practicing medicine without a license, last October, following the death, it is reported, of two patients, Rex H. W. Albrexstondare, Pasadena, recently lost his appeal to the second district court of appeals. He will have to serve a six months' sentence and pay a fine of $600 unless an appeal is made to the supreme court (THE JOURNAL, June 28, 1924, p. 2124).

CONNECTICUT

Personal.—Frank P. Underhill, Ph.D., professor of pharmacology and toxicology, Yale University School of Medicine, has accepted an invitation from the General Education Board to spend the next academic year visiting the leading universities of Europe.

State Board of Healing Arts.—The senate adopted a bill, May 28, which would establish a state board of healing arts to be composed of three members appointed by the governor, to pass on the qualifications of persons who desire to practice the healing arts. The bill provides that a written examination given and passed on by the board shall be a prerequisite to examination by the examining board in the branch of healing arts the applicant wishes to pursue.

Water Supplies of Rural Schools.—The state department of health recently undertook a survey of the water supplies of rural schools in Connecticut, and up to April 1 had analyzed and inspected the supplies of ninety-seven schools. Of these, seventy-five were obtained from wells, twenty-one from springs and one from a running stream. Twenty-four were pronounced satisfactory, thirty-six unsatisfactory, six very unsatisfactory and sixteen unsafe. Twenty-six of the wells were less than 20 feet deep. Fifty-six wells and springs were found in need of covering to prevent the entrance of surface water. The most striking point brought out by this survey was the large number of wells and springs used by rural schools which were poorly constructed and of the bucket-and-chain type.

FLORIDA

State Medical Election.—At the annual meeting of the Florida Medical Association, St. Petersburg, May 19-20, Dr. John S. McEwan, Orlando, was elected president; Drs. Henry Mason Smith, Tampa, Carl A. Williams, St. Petersburg, and John A. Simmons, Miami, vice presidents, and Dr. Shaler A. Richardson, Jacksonville, secretary-treasurer and editor of the journal.

GEORGIA

Dean Elkin Resigns.—Dr. William S. Elkin, Atlanta, for seventeen years dean of the Emory University School of Medicine, tendered his resignation at a meeting of the executive committee, May 23, effective, June 9, and was elected emeritus dean and emeritus professor of obstetrics and gynecology. Dr. Elkin has been associated with what is now the School of Medicine of Emory University since 1882. Dr. Russell H. Oppenheimer was elected dean to succeed Dr. Elkin. Dr. Oppenheimer graduated from the University of Michigan Medical School, Ann Arbor, 1917; served overseas during the World War, and last July was appointed superintendent of the Wesley Memorial Hospital.

ILLINOIS

Fourteen Elgin Physicians Cited.—The state prohibition director summoned fourteen physicians of Elgin to appear before him for a hearing to show cause why their permits to prescribe liquor should not be revoked. The proceedings of the hearings, May 19-20, will be forwarded to the prohibition commissioner at Washington for review, until which time the results will not be disclosed.

Change of Title of Professorship.—In accordance with the suggestion of the editor of the *American Journal of Roentgenology and Radium Therapy*, April, p. 377, the University of Illinois has changed the title of Albert Bachem, Ph.D., recently appointed professor of roentgenology to that of professor of biophysics, and has appointed Adolph Hartung, M.D., professor of radiology. The editorial that brought this matter to the attention of the university considered that the roentgenologist comes in contact with nearly every branch of medical practice, that he does his most useful work where he is received as a consultant, and that roentgenology is a branch of clinical medicine requiring a thorough knowledge of pathology and other fundamental medical subjects and a broad training in general medicine.

Infant Mortality Decrease.—According to figures just published by the state health director, a record infant mortality rate for Illinois was established in 1924. The rate was 71 per thousand births reported, which is ten points lower than for 1923 and represents a decrease of more than 1,000 infant deaths. In cities of 10,000 or more population, the rate was 75 per thousand births, while in smaller cities and rural areas the rate was 65 per thousand births. Oak Park had the lowest rate (30), Cairo, the highest (141); Forest Park, the second highest (125), and East St. Louis the third highest (107). The largest decline in infant mortality was in Waukegan, where the rate dropped from 119 to 69. The infant mortality rate for the U. S. registration area for 1924 was 72, higher by one point than that of Illinois.

Chicago

Personal.—Dr. Frank Smithies has resigned from the position of physician-in-chief and head of the department of internal medicine, St. Elizabeth's Hospital, Chicago.——Dr.

2. Young, H. H.; Hill, J. H., and Scott, W. W.: The Treatment of Infections and Infectious Diseases with Mercurochrome-220 Soluble, Arch. Surg. **10**: 813 (May) 1925.

Florence B. Siebert has been awarded the Howard Taylor Ricketts Prize in pathology at the University of Chicago for work on febrile reactions following intravenous injections.

Northwestern Medical Alumni to Hold Annual Banquet.—The Alumni of Northwestern Medical School will hold their annual banquet at the Auditorium Hotel, Friday, June 12, at 6:30 p. m. Speakers announced are the president of the university, Walter Dill Scott, the new dean of the medical school, Dr. Irving S. Cutter and Dr. Allen B. Kanavel. The toastmaster will be Dr. Morris Fishbein. Special clinics for returning alumni will be held by the faculty of the college, June 11 and 12.

Postgraduate Work at Rush.—The University of Chicago has appropriated $25,000 for the work of Rush Medical College, it was announced, May 28. This, the first appropriation made, is in consequence of the union of Rush College with the university a year ago. This money will be used for the general expense of instruction and research. In addition, Carl D. Greenleaf, Elkhart, Ind., has given $10,000 for the work of Rush Medical College. The construction of the Rawson Laboratory of Medicine and Surgery is proceeding rapidly. In the center comprising the present college building, Senn Hall, and the new laboratory, adjacent to the Presbyterian Hospital, instruction leading to the M.D. degree (the first two years of which are given at the university) and postgraduate research, will be carried on.

Society News.—There will be no further meetings of the Chicago Medical Society until October. Members who leave the city are requested to inform the information bureau (Central 3026) as to what disposition they desire made of calls in their absence.——The Chicago Urological Society met, June 4, at the John Crerar Library. Drs. Gustav Kolischer and Alfred E. Jones spoke on "A Contribution to the Technic of Coagulating Vesical Tumors"; Dr. Harry C. Rolnick on "Infection Along Sheath of the Vas Deferens," and Dr. Harry B. Culver on "Plastic Induration of the Corpora Cavernosa."——Elmer V. McCollum, Ph.D., Johns Hopkins University, Baltimore, will address the Alumni Association of Northwestern Dental School in the assembly hall, 31 West Lake Street, June 11, on "Diet." Members of the Chicago Medical Society are invited.

INDIANA

Sanitary Survey of White River.—The state board of health has authorized a sanitary survey of White River to determine the extent of pollution by sewage, the character of the waste that enters the stream, and the effect on the source of water supply. The survey is in response to the petition of 800 citizens of Washington. The state board will undertake the survey (which will require about a year) and will include a survey of the smaller tributaries and the watershed. White River is said to be the largest stream within the state, draining a watershed covering about two thirds of the state. It is the source of water supply for a large number of cities.

Personal.—Drs. Sam W. Hooke and Asa L. Myers, president and secretary, respectively, of the board of health of Noblesville, have resigned.——Dr. C. B. Collins, Jasonville, has been appointed county health commissioner of Green County to succeed the late Dr. J. B. Young, Worthington.——Dr. Edward A. Porter has been appointed health officer of Hartsville.——Dr. J. W. Clifford has been appointed city health officer of Worthington in Green County.——Dr. William R. Davidson, Evansville, has been reappointed to the board of medical registration and examination.——Dr. Hermann A. Duemling, Fort Wayne, was recently elected president of the Indiana State Hospital Association.

IOWA

Twin Lakes District Medical Society.—A diagnostic clinic will be held at Brownlee's pavilion, Twin Lakes, Rockwell City, July 16, under the auspices of the Twin Lakes District Medical Society, in which physicians from Rochester, Minn., Chicago and Omaha will take part. There will be a variety of subjects intended to be of service to the practitioner, a basket dinner on the country club ground at South Lake, and in the evening a dance.

Personal.—Dr. Fred J. Swift has been reelected mayor of Maquoketa for a term of two years.——Dr. James R. Thompson has been appointed city health officer of Waterloo to succeed the late Dr. Harry W. Sigworth.——The council of Mason City has elected Dr. M. J. Fitzpatrick city physician, to succeed Dr. Chester W. Hubbard.——Dr. Arthur L. Bryan has been elected city health physician of Ottumwa, to succeed Dr. E. B. Fulliam, Jr.——Dr. Emil O. Ficke, Davenport, has been reappointed city physician.——The governor announced, May 19, the appointment of Dr. Frank M. Fuller, Keokuk, to the state board of medical examiners to fill the unexpired term of Dr. George F. Severs, resigned, and of Dr. William R. Jepson, Sioux City, to fill the unexpired term of Dr. Henry C. Eschbach, resigned.

Iowa Heart Association.—During the annual meeting of the state medical society, May 12, the Iowa Heart Association was formally organized, with Dr. Merrill M. Myers, Des Moines, president; Dr. Fred M. Smith, Iowa City, vice president, and T. J. Edmonds, Des Moines, secretary-treasurer. An arrangement has been made with the Iowa Tuberculosis Association for carrying out the details of a state-wide movement for the study and prevention of heart disease. The full-time executive of the tuberculosis association was made secretary of the heart association, and the staff and local associations in every county in the state will cooperate with the new organization. The president of the heart association becomes an ex-officio member of the executive committee of the tuberculosis association, and the president of the latter will be an ex-officio member of the executive committee of the heart association. Consent for the extension of the work of the state tuberculosis association was obtained last April from the executive committee of the National Tuberculosis Association. The Iowa Heart Association will cooperate closely with the Iowa State Medical Society, the Iowa Clinical Medical Society, the medical department of the University of Iowa and the American Heart Association, with which it is affiliated.

KANSAS

Annual Dues Raised.—At the fifty-ninth annual meeting of the Kansas Medical Society, Topeka, an amendment to the constitution which raised the annual dues to $5 was unanimously adopted.

No Funds for Postgraduate Work.—According to the *Journal of the Kansas Medical Society*, the acting dean of the University of Kansas School of Medicine, Dr. Harry R. Wahl, finds it unlikely that there will be sufficient funds to provide for the regular course in postgraduate work for physicians this summer. He said that the attitude of the administration is, since few physicians took advantage of the course in the last few years and as the recent legislature made no allowance for an increase in the salary items, that this work should be discontinued.

KENTUCKY

Personal.—Dr. Edward P. Whistler, Buechel, has been appointed health officer of Jefferson County, to succeed the late Dr. Irvin Lindenberger. Dr. Whistler has been assistant health officer for three years.——Dr. James Ernest Fox, who recently resigned as health officer of Paducah, has accepted an appointment as acting assistant surgeon, U. S. Public Health Service, with station at Marine Hospital No. 11, Louisville.

Trachoma Unit Withdrawn.—The Trachoma Hospital, Pikeville, which has been maintained by the U. S. Public Health Service for about ten years, has been ordered closed. In a protest to the Surgeon General, the Pikeville Kiwanis Club wrote: "This hospital has done more good for the people of our section than anything ever fostered here by the federal government. It has been full since established and has always had a long waiting list, which condition exists at present." The community furnished the building free of cost to the federal government at an expense of $100 a month, and within the last twelve months spent more than $600 in repairs, at the request of the Public Health Service.

MARYLAND

Personal.—Dr. Alan N. Drury, research worker under the Medical Research Council, England, and honorary assistant, cardiac department, University College Hospital, London, gave a public lecture, May 22, at Johns Hopkins Hospital, on "Conduction in Damaged Heart Muscle."—Dr. Victor F. Cullen has been reappointed superintendent of the state tuberculosis sanatorium near Sabillasville.——Dr. William Siegal has been reappointed superintendent of the colored branch of the sanatorium located at Henryton, Carroll County.

Conference of Health Officers.—At the annual conference of health officers and boards of health of Maryland, Osler Hall, Baltimore, June 12-13, among others Surg. Gen. Hugh S. Cumming and Asst. Surg. Gen. Arthur M. Stimson, U. S. Public Health Service, Dr. Robert H. Riley, chief, state bureau of communicable diseases, Dr. Valcoulon L. Ellicott, Baltimore City Department of Health, and Dr. Alphonse R. Dochez, New York, will speak on Friday. The program for Saturday has been arranged with special reference to the work of public health nurses.

MASSACHUSETTS

Society News.—The North Shore Medical Fraternity met, May 18, at Lynn. Dr. Louis E. Phaneuf gave an address on "The Newer Methods of Cesarean Section." The second annual outing of this organization will be, June 24, at Deer Cove Inn, Swampscott, Mass.

Professor of Hygiene Appointed.—Dr. Alfred Worcester, Waltham, has been appointed Henry K. Oliver Professor of Hygiene at Harvard University, Boston. Dr. Worcester will serve also as head of the department of hygiene and physical education, of which Dr. Derric C. Parmenter has been acting head this year.

Hospital Library Service.—During the conference of library clubs of New England, a meeting on hospital library service will be held at the New Ocean House, Swampscott, June 23. Hospital superintendents, trustees and staffs are invited. Among the speakers will be Dr. Joseph B. Howland, superintendent, Peter Bent Brigham Hospital, Boston, who will speak on "The Library Administered by the Hospital," Dr. Norman J. Blackwood, Captain, U. S. Navy, on "The Effect of the Library on the Morale of the Hospital."

Graduate Work at Simmons College.—Among the opportunities offered for graduate work at Simmons College, Boston, is a two year program in public health and laboratory training, leading to the degree of master of science. One year is spent at the college in theoretical work and thirty-two weeks in various state laboratories, with an additional term at the college for the preparation of a thesis. There are also courses for laboratory workers in food chemistry or bacteriology specially arranged for one or two years, depending on previous preparation, and leading to the degree of bachelor of science, and courses in medical and psychiatric social work having a one year program leading to the degree of bachelor or master of science.

Appointments at Boston University.—The dean of the School of Medicine of Boston University has announced the appointment of Dr. Milo C. Green as registrar to succeed Dr. Wesley T. Lee, resigned; also the promotion to the grade of associate professor of Drs. William A. Ham, clinical obstetrics; Samuel R. Meaker, gynecology, and William D. Rowland, ophthalmology, and promotions to the grade of assistant professor of Drs. Albert S. Briggs, clinical medicine; Edward S. Calderwood, clinical medicine; George N. Lapham, diseases of the chest; John A. MacMillan, dermatology; Arthur H. Ring, neurology; Edwin W. Smith, clinical obstetrics; William K. S. Thomas, clinical surgery, and Ralph C. Wiggin, genito-urinary surgery. There were announced also the names of fourteen additional faculty members in the grade of instructor and assistants.

MICHIGAN

Sixty-Eight Chiropractors May Have to Quit.—The prosecuting attorney, Detroit, announced, May 16, that he had notified sixty-eight unregistered chiropractors in the city that they must obtain licenses, quit business or face prosecution. Practicing chiropractic without a license in Michigan is punishable by a fine of $200 or six months in jail, or both.

Society News.—Dr. James E. Davis, Detroit, addressed the Trudeau Society of Kalamazoo, May 19, on "Tuberculosis of the Kidney."—Dr. George W. Crile, Cleveland, recently addressed the Ingham County Medical Society.——Dr. James E. Davis, professor of the department and director of pathology, Detroit College of Medicine and Surgery, Detroit, addressed the Genesee County Medical Society at Flint, recently, on "Pathology of the Kidney."——Mr. Benjamin Gruenberg, managing director of the American Association for Medical Progress, addressed the Washtenaw County Medical Society at Ann Arbor, recently.——Dr. Hugh Cabot, dean and professor of surgery of the University of Michigan Medical School, Ann Arbor, recently addressed the Oakland County Medical Society at Pontiac on "The Management of Small Stones in the Kidney and Ureter," and the Postgraduate Medical Conference at Alpena on "The Care of Your Personal Health."——Drs. Aldred S. Warthin and Preston M. Hickey, professors of roentgenology and pathology, respectively, University of Michigan Medical School, Ann Arbor, gave a clinical pathologic conference on "Bone Sarcoma" before the Kent County Medical Society, recently, at Grand Rapids.——Dr. Henry A. Luce has been elected president of the Wayne County Medical Society, Detroit; Dr. James H. Dempster, vice president, and Dr. Richard M. McKean, secretary.

MINNESOTA

Hospital News.—A new 200-bed hospital to be erected in the immediate future in St. Cloud has been announced by the Sisters of the Order of St. Benedict, St. Joseph, to cost more than $400,000, on the 20 acre tract just North of Hester Park, purchased six years ago.——The Winona General Hospital, Winona, has received the bequest of $36,000 under the conditions of the will of the late Dr. Hugh F. McGaughey of Winona for the building of a tuberculosis hospital.——The Western Minnesota Hospital, Graceville, is to be enlarged to a capacity of sixty beds.——Dr. Fred G. Carter has been appointed superintendent of the Ancker Hospital, St. Paul, for a term of four years.

Malignant Smallpox.—The law requiring vaccination against smallpox was repealed in Minnesota in 1903. In the next twenty years (1903-1923) there were 60,841 cases of smallpox and 289 deaths. There were 35,152 cases with 108 deaths, from 1913 to 1923. Of these patients, 586 had been vaccinated within seven years, and none of them died; 1,458 had been vaccinated more than seven years before, and one of them died; there were 33,108 who had never been successfully vaccinated, and 107 of them died. During these eleven years, only the mild type of smallpox prevailed, except in one year, when malignant smallpox ran a short course. Among 307 fatal cases in 1924 in Minnesota, not one of the patients had been successfully vaccinated within seven years, forty-seven had been successfully vaccinated more than seven years before, 243 had never been successfully vaccinated, and seventeen were unable to give a definite history of vaccination. There were 346 cases and ninety-nine deaths last January, and of the fatal cases only one patient had been vaccinated within seven years. He was a boy who had been ill for months with Hodgkin's disease; seventy who died had never been successfully vaccinated.

NEBRASKA

University Hospital to Build.—The regents of the University of Nebraska have allotted to the College of Medicine at Omaha sufficient funds to construct another wing of the University Hospital. This will make the number of beds available for clinical teaching about 230 and provide a new home for the library, which now totals more than 40,000 bound volumes.

NEW HAMPSHIRE

State Medical Election.—Dr. Thomas W. Luce, Portsmouth, was elected president of the New Hampshire Medical Association at the annual meeting, Manchester, May 19-20; Dr. John H. Gleason, Manchester, vice president, and Dr. Dennis E. Sullivan, Concord, secretary-treasurer. The house of delegates created the new office of corresponding secretary. The next annual meeting will be at Concord.

Surgical Club Meeting.—Dr. Richard H. Miller, Boston, addressed the New Hampshire Surgical Club, Manchester, recently, on "Diagnosis of Acute Abdominal Diseases," and Colin C. Stewart, Ph.D., professor of physiology, Dartmouth Medical School, on "Physiology of the Thoracic Organs in Relation to Surgery." The morning session was given over to a surgical clinic by the staff of the Elliott Hospital. The society voted to make the *Boston Medical and Surgical Journal* the official organ for the publication of its papers.

NEW MEXICO

State Medical Election.—At the forty-third annual meeting of the New Mexico Medical Society, Clovis, Dr. Charles F. Beeson, Roswell, was elected president; Dr. Harry M. Smith, Las Vegas, vice president, and Dr. Charles M. Yater, Roswell, secretary-treasurer. The next annual meeting will be at Albuquerque.

Public Health Association Organized.—At the recent annual meeting of the New Mexico Health Officers' Conference,

Albuquerque, the New Mexico Public Health Association was organized with Dr. James R. Scott, Albuquerque, president, and Dr. Harry P. Mera, Jr., Santa Fe, vice president. The association adopted a policy encouraging annual physical examinations and complete birth and death reports, and appointed a committee to take up with the state department of education the training of public school teachers in health matters.

NEW YORK

Hospital News.—The Butterfield Memorial Hospital, Cold Spring, costing about $95,000, has been opened.——The Ideal Rest Home and Hospital, Orwell, has been reopened with a capacity of 112 beds.——A wing will be erected at the Staten Island Hospital in the near future at a cost of $445,000, according to plans adopted by the New York State Board of Charities.——The New York State Hospital Commission has called for bids for a new building and a fire protection system for the Brooklyn Hospital.——A building permit has been issued for the erection of the Brownsville and East New York Hospital Nurses' Training School at a cost of $200,000.

Smallpox in Nassau County.—The mild form of smallpox prevalent in Nassau County has increased to fifty cases. A family of nine at Kingspoint were all found infected, according to the state board of health. The Glen Cove Medical Association, May 25, offered the facilities of the community hospital to the public health officer, and temporary vaccination stations have been opened in Manhasset, Douglaston, Westbury, New Hyde Park, Bayside and Queens Village. Nearly 9,000 persons have been vaccinated recently in the North Hempstead district. The Nassau County Medical Society, May 26, devoted its entire session to a discussion of methods of prevention and control of smallpox.

New York City

Postmen Give Memorial.—Postal employees of the city have pledged $60,000 to the Presbyterian-Columbia Medical Center as a memorial to Edward M. Morgan, former postmaster of New York City.

Award of Medal.—The Remington Honor Medal for 1925 has been awarded to Dr. Henry M. Whelpley, dean of the St. Louis College of Pharmacy. This is the sixth award of the medal, which is bestowed annually by the New York branch of the American Pharmaceutical Association.

Physician Sentenced.—According to reports, Dr. Frederick M. Ranney pleaded guilty, April 28, before the federal court of violating the Harrison Narcotic Law and was sentenced to five years imprisonment and fined $1,000. The prison sentence was suspended, owing to his age and because of an injunction practically restraining him from practicing his profession.

Public Health Laboratory Officers.—At the ninth annual meeting of the New York State Association of Public Health Laboratories, Syracuse, May 12, Dr. Victor C. Jacobson, Albany, was elected president; Dr. Morris Maslon, Glens Falls, vice president; Dr. Frederic E. Sondern, member of the council, and Mary B. Kirkbride, state department of health, Albany, secretary-treasurer.

Industrial Hygiene Lectures.—A series of twenty-four lectures was given at the New York Academy of Medicine on industrial hygiene from March 14 to April 22 under the auspices of the public health committee, the division of industrial hygiene of the state department of labor and the New York Tuberculosis Association. Among the lecturers were Drs. Allen K. Krause, Joseph A. Blake, Linsly R. Williams, Iago Galdston and Haven Emerson.

Society News.—The program at the stated meeting of the New York Academy of Medicine, May 21, was presented by the department of metabolism of the Vanderbilt Clinic, New York, Mrs. P. Renee Wiener speaking on "The Application of Newer Methods in Blood Chemistry to Clinical Medicine," Dr. Henry E. Marks on "Iodin in the Treatment of Diseases of the Thyroid Gland," and Ernst Friedrich Muller on "The Mechanism of Insulin Action."——The New York Academy of Medicine has just issued its List of Hospitals and Fixed Clinics in New York City with Transportation Guide for 1925.——A public meeting was held, May 19, by the Medical Society of the County of Kings on the subject, "The Community Relationship of the Medical Profession."

Committee on Thromboangiitis Obliterans.—At a recent meeting of the general committee for the study of this disease, of which Dr. Reginald H. Sayre is chairman, the first contribution of $500 for the investigation was received from a patient in Brooklyn. It was decided to appoint a subcommittee to devise ways to obtain funds to carry on this work. A subcommittee was appointed to prepare a questionnaire to be sent to hospitals and physicians throughout the country to gather data on the frequency of thromboangiitis obliterans, the character of the population affected and the value of methods of treatment. A subcommittee was appointed also to study the clinical aspects of the disease and another to institute research into its etiology. The secretary of the general committee is Dr. Benjamin Jablons, 498 West End Avenue.

NORTH CAROLINA

Medical School for Negroes.—It is reported that Johnson C. Smith University—formerly Biddle University—Charlotte, is to establish a school of medicine for the training of negro physicians. The university is a beneficiary of the Duke Foundation to the extent of 4 per cent. of the foundation's annual income.

Dr. Purefoy Sentenced.—Dr. George W. Purefoy, Asheville, was recently sentenced in federal court for violation of the Harrison Narcotic Law to pay a fine of $1,000 and serve two years in the penitentiary. The confinement was suspended for two years, Dr. Purefoy being under bond is required to report at each term of the federal court during this period. The federal authorities alleged during the trial that the defendant had administered 325 ounces of morphin in the last two years.

Additional Narcotic Restrictions.—The antinarcotic law passed by the legislature in March forbids the sale and prescription of drugs regulated under existing federal law. Section 3 provides that no physician or dentist shall dispense, administer, distribute, give or prescribe any opium, coca leaves or any compound or derivative thereof except standard preparations and remedies permitted by law, to any person known to be an habitual user of any of said drugs, unless prescribed, administered, dispensed or given for the cure or treatment of some malady other than the drug habit . . . or for the use of a patient suffering with cancer or other incurable disease. The new statute was not approved by the state board of health.

Personal.—Dr. Hubert A. Royster, Raleigh, delivered the Jerome Cochran lectures at the recent annual session of the Alabama State Medical Association in Birmingham.——Dr. William E. Warren, Williamston, has been reelected county physician of Martin County.——Dr. John M. Manning has just been elected for his third term as mayor of Durham.——Dr. Lester L. Williams, for four years health officer of Cumberland County, was recently elected by the city board of aldermen and county board of health joint health officer of Fayetteville and Cumberland County.——Dr. Arthur T. Pritchard, Asheville, was elected first vice president of the Association of Surgeons of the Southern Railway, at the annual session in Savannah, Ga., May 12.——Dr. Sidney E. Buchanan, Concord, was elected president at the fifteenth annual session of the North Carolina State Health Officers' Association in Pinehurst; Dr. Lester L. Williams, Mount Airy, vice president, and Dr. Frank M. Register, Raleigh, secretary-treasurer (reelected).

NORTH DAKOTA

Hospital News.—In addition to the $350,000 annex now under construction, the St. John's Hospital, Fargo, has contracted for a $400,000 addition.——Trinity Hospital, Minot, has let the contract for an addition of three stories to the present building, which will make this one of the largest hospitals in the state.

State Medical Election.—At the annual meeting of the North Dakota State Medical Association, Fargo, May 18-19, Dr. John H. Rindlaub, Fargo, was elected president; Dr. N. Oliver Ramstad, Bismarck, president-elect; Drs. Thomas Mulligan, Grand Forks, and William F. Sihler, Devils Lake, vice presidents; Dr. Archibald J. McCannel, Minot, secretary, and Dr. William W. Wood, Jamestown, treasurer. The next meeting will be at Minot.

OHIO

Scarlet Fever Epidemic.—There was in May an epidemic of ninety-one cases of scarlet fever in a period of ten days in a village in southeastern Ohio. Of the ninety-one patients, ninety drank milk from one dairy. Contrary to law, bottles from homes where scarlet fever existed were regularly col-

lected by milk drivers and taken back to the dairy for refilling.

Centenarians in Ohio.—Ten certificates of death, each giving the age at more than 100 years, were received by the state department of health in 1924. Seven of these were for white women and three for white men; four were natives of Ohio, four of Ireland, one of Pennsylvania and one of New York. In the previous year the deaths of only five centenarians were reported. Of these, three were women and two men.

Personal.—Dr. M. C. Dysart, chief of the division of industrial hygiene, state department of health, resigned, May 1, to become chief of the division of disease prevention of the city of Columbus.——Dr. E. J. Schwartz, epidemiologist in the state department of health, resigned, April 20, to become district epidemiologist in the state department of health of Florida. He will have charge of epidemiologic work in seventeen counties and an office at Tampa.

The Increase of Rabies.—In the last few months rabies has increased so much in Ohio that the state department of health considers the situation serious enough to devote a page and a half of *Ohio Health News* to this subject. The increase is attributed to indifference to laws that provide for the control of dogs and to a lack of knowledge of rabies. In April, 1924, there were twelve positive cases of rabies determined by the division of laboratories; in April, 1925, there were forty-three, and the total number of cases this year is almost as large as for the entire year of 1924. Many counties report that their funds for the payment of Pasteur treatment are depleted. Information regarding rabies (educational circular No. 120) may be obtained from the state department of health on request.

OREGON

Personal.—Dr. Leslie G. Johnson, Marshfield, has been elected chief of staff for the new Wesley Hospital, which will serve the Coos Bay district.——Dr. William W. P. Holt, Medford, has resigned as county health officer and has been succeeded by Dr. V. S. Gearey.——Dr. J. A. Burket, Coquille, has resigned as medical officer of Coos County to engage in private practice.

PENNSYLVANIA

Post-Graduate Work at Scranton.—In conjunction with the Lackawanna County Medical Society, the Scranton Post-Graduate Medical Group announces that Dr. William Neumann, Vienna, a teacher in diseases of the chest, will spend the month of July in Scranton teaching a class of forty physicians, who are members of the Post-Graduate Group affiliated with the Graduate School of Medicine of the University of Pennsylvania. In accordance with a policy inaugurated by the state medical society, this group was organized in 1922, Scranton being the first. Privileges of the class have necessarily been limited to members of the Scranton Post-Graduate Group.

Society Establishes Annual Lecture.—At a recent meeting of the Fayette County Medical Society, it was voted to establish an annual scientific lecture course relating to medicine in its broadest sense or to any of the allied sciences, to be known as the Dr. Hugh Campbell Lectures in honor of the first graduate physician to locate in Fayette County and the first president of the county society. A fund not exceeding $200 a year will be appropriated to secure a lecturer of recognized attainments, and a permanent committee was formed which shall have full charge of the arrangements. Dr. Theodore Baker, Pittsburgh, addressed the society at this meeting on "Some Urologic Problems of Interest to the General Practitioner."

Gifts to University.—Two anonymous contributions, aggregating $135,000, are included in the first announcement of individual alumni subscriptions in the University of Pennsylvania's fifteen year campaign for $45,650,000. The list is led by a subscription of $105,000 from Charles C. Harrison, a graduate of the class of 1862 and former provost of the university. The anonymous subscriptions include one for $100,000, credited to the class of 1878, and one for $35,000, credited to the class of 1889.——A gift of $75,000 from the estate of the late Dr. William Pepper, a former provost of the university, to the endowment campaign came as a result of action taken by Senator Pepper and Dr. William Pepper, dean of the School of Medicine, joint trustees of the estate. The money will go to increase the endowment of the William Pepper Laboratories of Clinical Medicine.

Philadelphia

Medical Club Visits West Point.—The Medical Club of Philadelphia went by boat, May 14, to West Point, leaving Jersey City aboard the *Sea Gate*, which was specially chartered for the trip. The club was the guest of the medical officers on duty at the academy at West Point through the courtesy of the surgeon general of the army.

Reception at Medical Club.—Dr. J. Basil Hall, president of the British Medical Association, master of the Queen's Hospital and surgeon-in-chief of the Royal Infirmary at Bradford, was the guest of honor of the Medical Club of Philadelphia at a reception in the Bellevue-Stratford, May 27. Dr. William Harley Smith, former president of the Academy of Medicine of Toronto, also addressed the meeting.

Dr. Elliott Goes to Tokyo.—Dr. Mabel E. Elliott, member of the staff of the Women's Medical College Hospital, has been appointed head of the new public health department of the American Hospital at Tokyo, Japan. Dr. Elliott has been decorated several times by foreign governments for services in relief work in the Near East. One of her achievements was the evacuation of refugees from Marash, Anatolia, after the capture of that city by the Turks.

Child Guidance Clinic Opens.—The All-Philadelphia Child Guidance Clinic, to be conducted for two years at a cost of $110,000, was opened, May 19, at the Children's Hospital, Eighteenth and Bainbridge streets. The clinic is being financed by the National Committee for Child Hygiene. It will be the sixth demonstration of its kind. Dr. Frederick H. Allen, the director, has been resident psychiatrist of Phipps Institute clinic for the last four years; Dr. Christina M. Leonard is chief of staff; Richard H. Paynter, Jr., and Phillis Blanchard have been appointed clinical psychologists.

Retired on Account of Age.—Dr. Rufus B. Weaver, professor of anatomy, and Dr. Clarence Bartlett, professor of medicine, have been retired from the faculty of the Hahnemann Medical College, because of the decision of the board of trustees to establish 65 years as the age of retirement. Dr. Weaver is 84 years old. He has been connected with the college for fifty-five years and is credited with having dissected the entire spinal nervous system. The model of this dissection is in the college museum and was exhibited at the World's Fair at Chicago and the St. Louis Exposition. Dr. Bartlett is 66 years of age. He has been professor of medicine for forty-six years. He is the author of several medical surveys and medical books.

Professors of Obstetrics Appointed.—Dr. Pascal Brooke Bland was appointed professor of obstetrics and Dr. Norris Wister Vaux clinical professor of obstetrics, a newly created chair, at Jefferson Medical College, May 25. Dr. Bland, who was assistant professor of gynecology, succeeds Dr. Edward P. Davis, who resigned last December. Dr. Bland graduated from Jefferson in 1901; took postgraduate work in Vienna, Berlin, Munich, Freiberg, Paris and London, and was assistant to Dr. Edward E. Montgomery and an instructor at Jefferson before being elected assistant professor. Dr. Vaux graduated from the medical school of the University of Pennsylvania in 1905; did postgraduate work at the Rotunda Hospital, Dublin University, and has been obstetrician at the Chestnut Hill, Bryn Mawr and Lying-In hospitals. He was with the Pennsylvania Hospital Unit during the World War; was elected demonstrator of obstetrics at Jefferson in 1922, and made associate professor last year.

SOUTH CAROLINA

Personal.—Dr. Davis Furman, Greenville, has been appointed a member of the state board of health to succeed the late Dr. Claude C. Gambrell. Dr. Furman, for a number of years, was chairman of the board of health of Greenville. ——Dr. Ralph G. Beachley, former health officer of Dillon County, has been appointed in charge of the Spartanburg County health unit and elected president at the fifth annual meeting of the South Carolina Public Health Association, Spartanburg, April 21-23.

County Health Work.—Fifty per cent. of the people living in the rural part of South Carolina come within the jurisdiction of full-time county health departments. South Carolina now stands at the top, according to the state board of health, in rural health work. There are fifty-seven public health nurses in the state working under supervision of the bureau of public health nursing, and eleven counties employ dentists in the public schools. The department of rural

sanitation of the state in the last two years has made 116,379 typhoid inoculations, 34,766 smallpox vaccinations, and 7,021 inoculations of toxin antitoxin; 26,563 school children have received medical examinations.

SOUTH DAKOTA

State Health Officer Resigns.—Dr. Park B. Jenkins, for twelve years superintendent of the state board of health, has tendered his resignation, effective June 30. The governor has appointed Dr. John F. D. Cook of Langford to succeed Dr. Jenkins, and declared that the board of health will remain at Waubay until the state is in a position to supply quarters on the capitol grounds.

TEXAS

Dean Keiller Resigns.—Dr. William Keiller, dean of the University of Texas Medical Department, tendered his resignation to the board of regents, May 19. Dr. Keiller will remain in office for another year. Dr. Charles T. Stone, associate professor of clinical medicine at the university, has been appointed professor of medicine to succeed Dr. Marvin L. Graves (THE JOURNAL, April 4, p. 1057), and has been granted a year's leave of absence to visit schools in America and abroad, during which time Dr. Graves has consented to remain in charge of the chair of medicine.

CANADA

Ontario Medical Association.—At the forty-fifth annual meeting of the Ontario Medical Association, Toronto, May 5-8, the treasurer reported that about $5,000 had been expended for post-graduate speakers. The committee on ethics reported that it seems desirable for hospitals when giving items to the press concerning medical procedures in hospitals to refrain from mentioning the names of the physicians and surgeons concerned. The committee on public health supported the idea of full-time district medical health officers and reported that the services of the tuberculosis diagnostician had been in great demand all over the province. The retiring president of the association said at the association dinner that there was good reason to believe that "for a person with little or no education to call himself an osteopath or chiropractor, prefix his name with the word 'doctor' and prey upon the public would soon be a thing of the past," and that a board of regents to deal with drugless practitioners was to be established.

GENERAL

Personal.—Dr. Hubert Work, Secretary of the Interior, was elected president of the Medical Veterans of the World War at the annual session, Atlantic City, May 28.

Posthumous Award of Medal.—The Lebanon Government of Syria has awarded the Medal of Merit posthumously to Drs. Samuel T. Darling, Baltimore, and Norman V. C. Lothian of Scotland who were recently killed in an automobile accident in Syria.

Dr. Crumbine Appointed Director. — Secretary Hoover announced, May 16, the appointment of Dr. Samuel J. Crumbine as general director of the American Child Health Association. Dr. Crumbine was for many years secretary of the state board of health of Kansas, state health officer, and dean of the University of Kansas School of Medicine, from which positions he resigned in 1923 to become director of states relations of the American Child Health Association.

Opportunities in Public Health.—A booklet entitled "Opportunities for a Life Career in the Field of Public Health" has been issued by the U. S. Public Health Service, which has a limited number for free distribution to educational and health agencies.——The series of leaflets on "Habit Training for Children," prepared by Dr. Douglas A. Thom in connection with the Division on Mental Hygiene of the Massachusetts Department of Mental Diseases, are being published in Italian and translated into Yiddish.

Plans for Mental Hospitals.—The National Committee for Mental Hygiene has on file for free distribution and consultation purposes plans of mental hospitals and schools for the feebleminded in Alabama, Arkansas, California, Colorado, Connecticut, District of Columbia, Florida, Illinois, Indiana, Iowa, Kansas, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Virginia, West Virginia, Wisconsin and Wyoming. These plans have been assembled by the committee's division on hospital service under the direction of Dr. Samuel W. Hamilton.

The Leonard Prize.—The American Roentgen Ray Society offers again this year the Leonard Prize of $1,000 to the author of the best piece of original research in the field of roentgen ray, radium or radioactivity. Competition is open to any one living in the western hemisphere or in the outlying possessions of the United States. Papers presented to the committee must be submitted in English not later than July 1, 1925, and enclosed so that the identity of the contestant will not be known to the committee until after the award is made. The committee comprises Dr. George W. Grier, chairman, 8088 Jenkins Arcade, Pittsburgh, Frederick M. Law, New York, and Gordon E. Richards, Toronto, Ont.

Ernest Harold Baynes Memorial.—A memorial has been planned by a committee of physicians and naturalists in the form of a fund of $100,000 to the memory of Ernest Harold Baynes, who died recently in New Hampshire. As much of the income from the fund as may be necessary in the discretion of the committee will be paid to the widow, and the remainder, and, at her death, the principal, will go to the American Association for Medical Progress which Mr. Baynes helped to organize. The fund will be administered by the First National Bank of Boston as trustee. Dr. W. W. Keen, Philadelphia, is chairman of the committee, and among other members are Drs. William J. Mayo, Rochester, Minn.; William H. Welch, Baltimore, Md.; Frank Billings, Chicago; Ray Lyman Wilbur, Leland Stanford University, Calif.; Harvey Cushing, Boston; Evarts A. Graham, St. Louis, and Nathaniel Allison and Frank Ober, both of Boston.

Society News.—Dr. David Harrower, Worcester, was recently elected president of the American Ophthalmological Society, Dr. William Zentmayer, Philadelphia, vice president, and Dr. Emory Hill, Richmond, Va., secretary-treasurer. Dr. Thomas B. Holloway, Philadelphia, will continue in charge of the transactions.——Dr. Clarence R. O'Crowley, Newark, N. J., was elected president of the American Urological Association at the St. Louis meeting, May 21-23; Dr. John R. Caulk, St. Louis, president-elect; Dr. Homer G. Hamer, Indianapolis, secretary, and Dr. James B. Cross, Buffalo, treasurer.——At the annual meeting of the American Psychopathological Association, Washington, D. C., May 7, Dr. Smith E. Jelliffe, New York, was elected president; Drs. Ross M. Chapman, Towson, Md., and Edward J. Kempf, New York, vice presidents; Dr. Sanger Brown, 2d, New York, secretary, and Dr. William C. Garvin, Binghamton, N. Y., treasurer.

Bequests and Donations.—The following bequests and donations have been announced recently:

The Children's Hospital, Philadelphia, $250,000, Pennsylvania Hospital, $50,000, and the residue of the estate to the Children's Hospital, St. Paul's School, Pennsylvania Hospital and the Church of St. James the Less, by the will of the late Wilson Catherwood.

The Presbyterian Hospital, Philadelphia, $5,000 by the will of the late H. O. Wilbur for the endowment of a free bed.

To the building fund of the Knickerbocker Hospital, New York, $25,000 from the National Biscuit Company.

Lenox Hill Hospital, New York, about $40,000 from the estate of Frederick Wallman, late of Wood Haven.

The proposed Walter Hines Page Memorial School at Johns Hopkins University, Baltimore, $25,000 from Charles L. Pack, Lakewood, N. J.

The Northern Westchester Hospital, Mount Kisco, N. Y., the New York Medical College and Hospital for Women, New York, each $5,000, by the will of the late Miss Phebe E. Mills.

The Manhattan Eye, Ear and Throat Hospital, New York, $5,000, and a residuary estate amounting to about $300,000 to the Presbyterian Hospital, New York, by the will of the late Margarette Elizabeth Griffith.

The Montefiore Hospital for Chronic Invalids, New York, the residuary estate and trust funds amounting to $700,000, providing his children die without issue, by the will of the late Isaac Shiman.

The residue of the estate of Miss Elizabeth L. Jenkins, Baltimore, estimated at $1,500,000, is left to "the support and maintenance of a building or home or beds in some hospital for the benefit of persons known to be indigent and suffering from some physical disease or trouble."

Decatur and Macon County Hospital, Decatur, $30,000 from the Buck estate to erect a building as a memorial to Hiram and Martha Buck, pioneer settlers of Central Illinois.

The New York Kindergarten Association, $100,000, by the will of Ex-Senator William Clark, Butte, Mont.

The Rhode Island Hospital, Providence, $500,000 from Charles T. and Henry L. Aldrich, on condition that an equal amount be raised by the hospital.

St. John's Hospital, Long Island City, $10,000, under the will of James E. Clonin.

The Pennsylvania and Kensington Hospitals, Philadelphia, $100,000, by the will of the late Frank H. Ellis as memorials to his parents.

The Pennsylvania Hospital, Philadelphia, $53,515, by the will of the late Anne Latouche Garesche, who died in Paris in 1897 and whose estate was adjudicated May 6, 1925.

The University Hospital, Philadelphia, $5,000, by the will of the late Antoinette DeCoursey Patterson, to endow a bed in memory of her father, and a similar bequest to the Presbyterian Hospital to endow a bed in memory of her mother.

The children's Homeopathic Hospital, $2,000, and St. Christopher's Hospital, the Children's Country Week Association and the Home for

Crippled Children, Philadelphia, each $1,000, by the will of the late Martha McAlpine.

The Clinton Sears Arnold Sanatorium, Seabreeze, Fla., $20,000, from the estate of Miss Cornelia M. Arnold.

St. Luke's Hospital, New York, $365,591, and New York and Presbyterian Hospitals, each $265,591, by the will of the late John H. Flagler.

Harvard University, $50,000, the income from which is to be used for research in the etiology and treatment of diseases of man; $500 each to the Peter Bent Brigham Hospital and Free Hospital for Women, Boston, and $10,000 to the Children's Hospital, by the will of the late William H. Wellington.

Under the will of the late Dr. Edward L'Hommedieu McGinnis, gynecologist at the Woman's Hospital, New York City, his electrotherapeutic equipment and radium were left to the Crocker Institute for Cancer Research to be used under the direction of Dr. Francis Carter Wood.

The Pennsylvania State Commission of Health, $154,000, by the will of the late William F. Reimold, to be used to purchase such things as are not provided for by the state in the treatment of consumptives.

The Eye, Ear, Nose and Throat Hospital, New Orleans, $5,000 from T. H. McCarthy, one of the trustees.

Children's and Lankenau Hospitals, Philadelphia, each $1,000, by the will of the late Miss Fannie Rosengarten.

FOREIGN

Practitioners in Czechoslovakia Must Be Citizens.—In exceptional cases, eminent foreign specialists are allowed to practice medicine in Czechoslovakia for a limited time, but in all other cases every practitioner must be a subject of that country and have his diploma recognized by its universities. Persons graduating from other European universities of high standing must pass an examination and attend a Czechoslovakia university for one or two sessions.

Number of Medical Missionaries.—There are 1,157 qualified physicians from "western lands" at work as medical missionaries, according to the *China Medical Journal*, of whom 356 are women. There are also 612 graduate physicians working as missionaries who are natives of the countries in which they work, and 1,007 foreign nurses, 2,597 trained native male hospital assistants and 2,861 women assistants. There are altogether 858 mission hospitals, with 31,264 beds and 1,686 dispensaries. China leads in the amount of medical missionary work; India is second.

International Society of Medical Hydrology.—The annual meeting of this society was held in Paris, April 20-21. Dr. Gustave Monod (France) was elected president to succeed Dr. Fortescue Fox (England). A committee was appointed to report on the incidence of chronic rheumatic diseases in northern Europe as shown by official returns in England and Sweden and on their treatment by physical methods. Among other subjects, "Insulin Treatment in Relation to Medicinal Waters" was introduced by Drs. Chabanier (France), Poulton (England) and Epstein (New York). An invitation was received from Czechoslovakia to hold the next annual meeting in that country.

Anticancer Centers in Belgium.—The first of the four centers for research on and treatment of cancer was recently inaugurated at Liége. It was planned in 1914, but the war intervened. In the meanwhile, radium preparations have doubled in potency and tripled in price, but each university in Belgium now has 2 gm. of radium bromid at its disposal. The anticancer center has been handed over to the University of Liége. Professor Lejeune, the father of the movement in Belgium, was decorated on the occasion. This system of anticancer stations at accessible points throughout the country to train physicians in the early diagnosis of malignant disease and its treatment and to serve as centers for research, is being pushed in France. Bergonié devoted the last months of his life and his fortune to this cause.

Deaths in Other Countries

Sir **Arthur W. May,** late medical director general, British Royal Navy, April 20.——Dr. **Robert J. M. Buchanan,** late professor of forensic medicine, University of Liverpool, April 19.——Dr. **Reginald Dudfield,** medical officer of health for Paddington, England, April 19.——Dr. **H. Liepmann,** professor of psychiatry and neurology at Berlin, aged 62.——Dr. **G. Behrend,** emeritus professor of dermatology, Berlin, aged 79.——Dr. **H. Kossel,** professor of hygiene at Heidelberg, co-worker with Koch, aged 61.——Dr. **G. Bruylants,** emeritus professor of chemistry at Louvain.——Dr. **G. B. Grassi,** professor of comparative anatomy, Rome, senator and a leader in the campaign against malaria.——Dr. **A. Stefani,** emeritus professor at Venice.——Dr. **Albin Haller,** professor of organic chemistry, Paris, director of the Ecole de physique et chimie.——Dr. **Catharine van Tussenbroek,** Amsterdam, on the editorial staff of the *Nederlandsch Tijdschrift*, formerly member of the medical examining board, and noted for work in microscopy and obstetrics, aged 72.

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 23, 1925.

The Harnett Case Again

In a previous letter to THE JOURNAL (March 29, 1924, p. 1057) the case was reported of the unprecedented damages against two physicians of $125,000 for the wrongful detention of a lunatic. In THE JOURNAL subsequently (Aug. 9, 1924, p. 466) the reversal in the court of appeal of this judgment was described. The court held that the damages were assessed on a wrong basis, being "too remote" in the case of one of the defendants, Dr. Bond, a commissioner in lunacy, who had no legal right to detain the plaintiff for the short period he did while he telephoned to the other defendant, Dr. Adam, who was in charge of the licensed house from which the plaintiff had escaped. The latter was held to have done nothing wrong in receiving back the plaintiff and was therefore dismissed from the case. The jury in the lower court found that the plaintiff was sane at this time and that the defendants had not exercised due care and were responsible for his illegal detention for nine years. Hence the huge damages. An appeal was made from the court of appeal to the highest court in this country, the house of lords. In giving judgment, the lord chancellor said that the fact that the appellant, whom the jury found to be sane in December, 1912, when he was detained, and whom it doubtless considered to be quite sane at the time when the action was heard, had been confined as a lunatic during the greater part of the interval between those dates, had naturally given rise to anxiety. It was not proved at the trial or found by the jury that during that interval the appellant was of sound mind; but it was not impossible that the jury took that view and desired to compensate the appellant for his long detention by giving a verdict for heavy damages against the two defendants. If the defendants had been really responsible for an unjustifiable detention of the appellant during all those years, the sum awarded might not have been excessive; but the full investigation of the case both by the court of appeal and by this house had led to the conclusion that no such responsibility could be justly laid on Dr. Bond or on Dr. Adam. The lunacy acts provided for the protection of the public against the risk of unjustified detention by forbidding the detention of any person as insane except on a proper certificate and in a place duly certified for that purpose, and by requiring that every patient so confined should be personally seen and examined at regular intervals both by the commissioner in lunacy and by the visiting justices, and should be free to make complaint (in letters which must be forwarded unopened) to the lord chancellor or the judge in lunacy, to the secretary of state or to the commissioners, or to the persons (generally his relations) on whose petition he had been confined. It might be the fact that all these precautions were insufficient, and that the lunacy laws required to be further strengthened. But even so, that was no reason for visiting with vindictive penalties persons who had acted in good faith, and who were not responsible for any defect in the law. In his opinion the court of appeal came to the right decision, and he moved their lordships that the appeal be dismissed, with costs.

The Teaching of Psychologic Medicine

At the Royal Commission on Lunacy and Mental Disorder the question of psychiatric education was discussed, and the fact was deplored that the English student of medicine should have no opportunity of learning modern methods of diagnosing

incipient and undeveloped cases of disease. Sir Frederick Mott said that the teaching of psychologic medicine had been in operation for four years at the Maudsley Hospital as part of the medical curriculum. During the war there was an amount of ignorance displayed by physicians on the subject in question which cost the country a very great deal. What was lacking at the present time was a scientific knowledge that was practical. A research board had been set up for Birmingham, and it was hoped that it would become a center for the teaching of psychologic medicine. A laboratory had been fitted up there, and he would like it to be arranged that all outside asylums could use it for research. A lot of money was spent in this country on cancer and tuberculosis research, but with the exception of Dr. Maudsley, who gave practically half his fortune to it, he knew of no one who had really come forward to help investigations concerning insanity. Dr. E. Goodall said that at Cardiff $8,500 or $9,000 a year was paid for research, and there was also a grant from the Medical Research Council. Dr. R. Worth spoke of the after-care of mental cases, and said that through the agency of the After-Care Association this was gradually spreading, and there were centers for such work in several large towns. In further discussion emphasis was laid on the importance of the right people being appointed for after-care work, one speaker remarking that it was possible to get either an angel of mercy or a very tiresome woman. A general view was expressed that there should be a statutory obligation to pay for this work.

Denunciation of Rubber Corsets

"Rubber corsets transgress every principle of modern clothing, interfere seriously with the functions of the skin, which must be kept at a high level if we are to be healthy, and last, but not least, are most uncleanly," says Dr. R. King Brown, chairman of the executive council of the Institute of Hygiene, and lecturer on public health at Guy's Hospital.

Inquiry on Trypanosomiasis

With a view to the early dispatch of an international commission to equatorial Africa, a conference will be held at the colonial office to consider the question of trypanosomiasis in Africa. Great Britain, France, Italy, Belgium, Portugal and Spain will be represented by experts in tropical disease. In addition to the undersecretary of state for the colonies, Great Britain will be represented by Dr. A. G. Bagshawe, director of the Tropical Diseases Bureau, and Dr. Andrew Balfour, formerly director of the Wellcome Research Bureau. Professor Campenhout, director of the Public Health Service of the Belgian Colonial Office, will represent Belgium. The French delegates are Prof. Gustave Martin, formerly head of the trypanosomiasis mission in western equatorial Africa, and Professors Brumpt and Mesnil. Italy is sending Professors Lanfranchi and Alessandrini; Portugal, M. Aires Kopke, and Spain, Drs. Villa and Rocafert. The principal business is to decide on the personnel of the proposed commission and the particular areas to be visited. The conference is the outcome of a decision of the League of Nations to institute inquiries into the scourge, as a result of which an expert committee was appointed under the chairmanship of Dr. Andrew Balfour. The recommendations of this committee were approved by the League Council at Rome, last December, and the meeting of this conference is the next step. The committee has recommended the affording of facilities for conferences between administrators and medical officers on both sides of the frontiers in infected areas, cooperation between officials in order to ascertain what zones are affected, and the appointment of an adequate medical service. It was proposed that, apart from research by local laboratories and existing organizations in equatorial regions, a mission whose work would naturally be of a protracted character should be sent out to conduct detailed and scientific research.

The Gold Treatment of Tuberculosis

A report on the gold or "Sanocrysin" treatment of tuberculosis, introduced by Professor Møllgaard of Copenhagen, has been prepared by the Medical Research Council. This drug is a soluble complex salt of gold and sodium—sodium aurithiosulphate. A supply was made available to the Medical Research Council by Professor Møllgaard, with a supply of a protective serum introduced by him for use when the gold treatment causes too severe a reaction. The council issued the preparations to a number of whole-time professors of medicine and tuberculosis officers. The work on which the present preliminary report is based has been in progress in England for less than three months. The drug was found to cause nausea and vomiting in some cases immediately after it had been injected. In certain severe cases of tuberculosis of the lungs, sharp reactions were noted with high temperature and, in some cases, rashes of the skin. It is stated that "the drug does appear clinically to have a specific action on tissues infected by tubercle bacilli, and the severity of the constitutional reaction does appear to be directly related to the intensity of the tuberculous infection." It was the opinion of those observers who had had most experience in dealing with tuberculosis that the early cases of open tuberculous infection of the lungs did show some improvement though there was no dramatic benefit, such as that seen with insulin or arsphenamin in their corresponding diseases. On the other hand, cases with more advanced disease did not stand the treatment well, and the condition of some of these has been made worse; in serious cases of long standing they cannot endure the treatment in its present form. There were two cases, however, in which most striking improvement followed the use of the drug. The evidence is sufficiently encouraging to demand further clinical study. The Medical Research Council adds that extended observations are required before it can be clearly stated whether or not the gold salt is of value in the treatment of tuberculosis and before it should be made available for general use in medical practice in Great Britain.

The Decline in the Medicinal Use of Alcohol

In Edinburgh, forty years ago, every patient cost on an average $10.75 a year for drink, as part of treatment; last year, every patient cost about 10 cents. This illustration of the reduction in the use of alcohol in the treatment of disease was given at a National Commercial Temperance League luncheon in London. In 1900, every patient admitted into the great London hospitals received on an average nineteen tablespoonfuls of brandy as part of the treatment. Last year, every patient received on an average about three tablespoonfuls. All over the world there had been a great decline in the use of alcohol in treatment of disease.

Fertility Statistics

There has just been published a census return on "Dependency, Orphanhood and Fertility" which covers some 7,500,000 families of married men and married women of all ages. Of these 43 per cent. contained no children under 16; 23 per cent. contained one child under 16; 15 per cent. contained two children under 16, and 19 per cent. contained three or more children under 16.

The average number of "dependent" children per married man or married woman is given as 1.27 in the aggregate; the average, however, varies of course with the age of the parent, beginning at zero and rising steadily and progressively to a maximum of 2.18 children in the case of the married man of 39 or 40. Thus this age would appear to be that of "greatest strain in respect of dependents." Inci-

dentally, it is shown that miners have the largest families in this country. Next to them come coke, lime, and cement workers. At the other extreme are the professional classes and those engaged in textile trades. The fertility of miners is about 43 per cent. above the average, that of professional and clerical workers about 29 below it.

PARIS

(From Our Regular Correspondent)

May 20, 1925.

A Tuberculosis Sanatorium in a High Plateau Region

The Association des villages sanatoriums, composed of physicians and laymen who are interested in the crusade against tuberculosis, has been organized to establish sanatorium beds for tuberculous persons of limited means. The founders are planning to carry out an idea that is new in France: that of a sanatorium village patterned after Trudeau on Saranac Lake. The site is in the Alps of Savoy, at an altitude of 1,200 meters, in the high-plateau region of Passy, in the department of Haute-Savoie. These plateaus have a directly southern exposure, lying just opposite Mont Blanc. They are especially well protected, being surrounded by immense forests in which promenades on a level or in slightly hilly regions may be undertaken by the patients.

Alongside a central pavilion, which will contain twenty-five beds for weak patients, will be cottages with six beds each for patients who show more resistance. The style of architecture and the grouping of the buildings will harmonize with the scenery. The daily cost to patients will be barely sufficient to defray the expenses of administration and upkeep. The buildings are already under construction, and it is probable that the first sixty-four beds will be ready for patients by the end of the year.

The Crèches in Relation to Tuberculosis

At the instance of Prof. Léon Bernard, the council on public health of the department of the Seine passed at its last session the following resolution:

> The departmental council of hygiene, having learned of cases of tuberculous infection developing in infants in the crèches, owing to contact with tuberculous persons among the personnel, demands of the administration that the personnel of the crèches and day nurseries, whether private or municipal, be subjected to medical control which will insure the discovery of tuberculous infection in attendants in the same manner as in the dispensaries of the bureau of social hygiene of the Seine. Prospective attendants should be subjected to a rigorous examination prior to their engagement and should be reexamined every six months.

The Granting of Supplementary Pensions by Reason of Complications to Soldiers Pensioned for Pulmonary Tuberculosis

Article 12 of the Act of March 31, 1919, provides for the granting of a supplementary pension to soldiers pensioned with a disability of 100 per cent., in case there develops during the course of the disability necessitating the original pension "a complication susceptible of aggravating the evolution" of the original disease. Thus, soldiers pensioned on a 100 per cent. basis for pulmonary tuberculosis are granted a supplementary pension, which with the special allocations accorded in such cases amounts to 3,500 francs, or approximately $210, if pulmonary tuberculosis becomes associated with an extrapulmonary complication. Owing to such complication, the pension is raised to 7,000 francs, or $420. In cases in which pulmonary tuberculosis becomes complicated with an aggravation as troublesome as laryngitis, an intestinal lesion, an ostearticular suppuration, or the like, one will not censure the authorities for providing additional financial relief. But sometimes an infirmity that causes the pensioner only a slight aggravation of his condition automatically entitles him to a considerable increase in pension. This is true of anal fistula, which, no matter how slight the ailment may be, entitles a pensioner to an increase amounting to 3,500 francs from the moment such a condition has been definitely diagnosed. Recently, at a meeting of the Société des médecins de sanatorium, a cry of alarm was sounded by a tuberculosis expert, who pointed out the abuses that were arising. One of the worst features of this legislation is that many who have been pensioned for pulmonary tuberculosis and who develop an anal fistula refuse to be treated for the fistula, and some prevent its healing. The pensioners with pulmonary tuberculosis who have no anal fistula long to become affected with this complication, which presents such advantages at the price of so little inconvenience. They demand an examination and the employment of specialists, and return again and again for reexamination if they are disappointed in their hopes the first time. Measures should be taken to put an end to this regrettable state of affairs.

An Ovation in Honor of T. Tuffier

T. Tuffier is justly considered as one of the most eminent of French surgeons and as one who has contributed much to the renown of French surgery in foreign lands. His work may be said to embrace all branches of surgery. During the war, his great activity brought him many exceptional honors. He was the proponent and the animating spirit of the inter-allied surgical conferences, which rendered such excellent services. His friends, colleagues and pupils chose the period of the third Congress of Military Medicine and Pharmacy as a fitting time to congratulate him on his appointment to the rank of grand officer of the Legion of Honor. On this occasion a subscription was opened, as a result of which a magnificent portrait of Tuffier, the work of M. Baschet, was presented to him, April 22, at the Cercle Interallié, during the course of ceremonies at which many of the most eminent French and foreign surgeons were present.

BELGIUM

(From Our Regular Correspondent)

May 8, 1925.

Degeneracy in Relation to Heredity

Dr. Ley has submitted to the Royal Academy of Medicine of Belgium the results of his researches on degeneracy. In studying a group of normal children and a group of abnormal children, he endeavored to determine what part environment and what part heredity play in the physical and moral development of the individual. Each group comprised 150 children, 100 boys and fifty girls. The author studied the relative position of the subject with respect to the other offspring; his personal antecedents; his development from the standpoint of dentition, ability to walk, ability to speak; the place and nature of the home; the kind of food eaten; the occupation of the parents, their education, moral character, and so forth. For each of the points considered, the author gives the respective percentage for the two groups. For instance, he found that among the fathers of normal children alcoholism was in evidence in 12 per cent., whereas among the fathers of abnormal children alcoholism was a factor in 50 per cent. Infantile convulsions affected 3 per cent. of the normal and 75 per cent. of the abnormal subjects. Cleanliness of the home was found to be of high order in 137 of the 150 normal cases but only in fifty-four of the abnormal cases. The homes were very deficient in this respect in two normal and in thirty-one abnormal cases. In reality, the influences of heredity and environment are combined and interwoven. The statistics of the author show plainly the simultaneous influence of the two factors and the impossibility of advancing an exclusive theory.

Divorce as It Affects Mental Patients

At the request of the minister of justice, the Société belge de médecine mentale appointed a representative, Dr. Ley, to

draw up a statement as to the factors involved in drafting laws for the regulation of divorce affecting persons with mental disease. Dr. Ley has now finished his investigations and has filed his report with the society. He holds that no distinction should be made between patients affected with chronic mental disorders and other patients suffering from incurable chronic affections. It is difficult to determine accurately the duration of mental diseases, especially since changes in methods of treatment may modify the prognosis with regard to any mental patient. Ley recommends that the law bear this superscription: Draft of a law pertaining to divorce justiciable in spite of the fact that one spouse is affected with a mental disorder. The projected law should contain in the first article the simple mention of the fact that the legal stipulation prohibiting all divorce proceedings when one spouse is affected with mental disease has been annulled. An action for divorce may be brought by one spouse when the other is affected by a mental disease which has continued uninterrupted for a period of five years or more. The declaration or diagnosis of mental disease must be made by three physicians: the medical director of the institution in which the patient is confined, and two physicians who are specialists in mental disease, to be chosen by the court. The finding of the specialists need not confirm the incurability of the patient but should establish a change of feeling and of personality of such a nature that the fact of a divorce having been granted would not awaken a train of emotions prejudicial to the patient's welfare. The administrator appointed to protect the interests of the spouse affected with mental disease should be given extensive powers in order to prevent the possible abuse of the patient's rights and privileges.

Roentgenotherapy in Relation to Pregnancy

Drs. de Nobele and Lams have communicated to the Academy of Medicine their researches on the effects of roentgen rays on pregnancy and the development of the fetus. Monstrosities and other evidence of arrested development in the issue of women who have been given roentgen-ray treatment during pregnancy have been rather frequent. These findings are of great importance in view of the increasing use of roentgen rays in the treatment of uterine fibroma and the possibility of overlooking a beginning pregnancy. But these findings are not entirely conclusive, by reason of the possible existence of some other disturbing cause which might explain the origin of the arrested development. However, the irradiation of the pregnant guinea-pig and rat in the majority of cases causes the death of the fetus. The action of the rays on the fetus is more marked, the more penetrating the dosage and the earlier in the term the irradiation occurs. If the fetus was not killed, the authors noted the production of monsters. It was also observed that roentgen irradiation seems to favor the development in guinea-pigs of ovarian cysts.

Death of Professor Mahaim

Dr. Albert Mahaim, who was an instructor in psychiatry at the Faculté de médecine of Lausanne and one of the most brilliant men on the faculty, has succumbed to the effects of an operation. The distinguished professor, who was born in Liége in 1867, was also the director of the psychopathic hospital at Cory, near Lausanne.

A Prehistoric Mining Center

Addressing the Anthropological Society of Brussels recently, Dr. de Loë gave an account of the extensive excavations that the Royal Museum of Cinquantenaire has been carrying on at Spiennes since 1912. These excavations are very interesting from the ethnologic point of view. Spiennes, where evidences of the early activities of the human race are found, was, about four thousand years ago, one of the largest mining centers of western Europe. A large population living in fixed abodes, socially organized and expert in the art of mining, sought here the silica or flint for its tools and weapons. During the course of the excavations (1912-1914), interrupted by the war, the Royal Museum has unearthed a large number of pits for the extraction of flint. These present the appearance of a series of galleries or ledges rising one above another and evidently belonging to the neolithic age. The most recent excavations have enabled Dr. de Loë to establish, through examination of skulls, that the neolithic race, of which hitherto only the brachycephalic type had been known in Belgium, included also a dolichocephalic type. Now the question arises whether the miners at Spiennes did not constitute a group socially inferior to another group and doomed, by reason of that fact, to perform hard labor. There is evidence that these early inhabitants of Spiennes had some knowledge of agriculture. They lived in cabins quite similar to the huts that the wood-cutters still build in the woods. Butchered meat constituted apparently a large part of their diet. The researches have led to the discovery of a highly interesting organized society, so that the state decided to buy the neighboring area.

PRAGUE

(From Our Regular Correspondent)

May 5, 1925.

Birthday of Professor Muller

The Bratislava Medical School, which was founded after the creation of the independent state of Czechoslovakia, recently celebrated the fiftieth birthday of one of its founders, Prof. G. Muller. Born in 1875 in a suburb of Prague, he took up medical studies at the Prague Medical School, from which he graduated in 1899. After his graduation he spent some time in the pathologic laboratories of the late Professor Hlava, and having gone through most of the departments of the Prague Medical School as an extern he finally joined the staff of the gynecologic clinic of Professor Pawlik. Since 1903 he has served as the first assistant of this clinic and has developed the pathologic laboratory. In 1912 he was appointed lecturer in gynecology and obstetrics at the Prague Medical School, and in 1919 was nominated professor of gynecology for the newly opened medical school in Bratislava. The building that was assigned to his department was one of the poorest structures of the Bratislava hospital; nevertheless he was able in the course of the six years of his activities in Bratislava to transform it. The yearly average of confinements in the gynecologic department before the war was 350; lately it has exceeded 1,000. From 150 he increased the number of gynecologic operations to more than 2,000 in a year. The difficulties that he had to overcome were enormous because he started the new department with an inexperienced staff. In spite of all he has built up an institution that has the confidence of patients in a wide area and has become the center of an important group of scientific workers in the field of gynecology. Most of his publications are concerned with the histology of pathologic processes in the female genitals and have been illustrated with remarkable photomicrographs.

Trichinosis from Uninspected Meat

An isolated outbreak of trichinosis that occurred recently in Moravia was reported in one of the last sessions of the Association of Czech Physicians in Brno. Trichinosis has become such a rare disease in this part of the world, owing to the provisions of the law on the inspection of meat, that the present generation of physicians is quite unfamiliar with its clinical picture. The outbreak occurred in three families of the same village, where ten persons came down in the

course of a week with symptoms suggesting a toxic enteritis. Later on the involvement of peripheral nerves was apparent. Two persons died within a week after the onset of the symptoms. The district health officer who was called by the attending physician had the patient transported to the Brno general hospital, where the diagnosis of acute trichinosis was made. The epidemiologic investigation of the case showed that all the persons affected with the disease had eaten meat from a pig that had been slaughtered illegally without having been inspected by the veterinarian. The meat had been smoked before it was eaten, but this was apparently insufficient to render it harmless. Trichinosis is probably often overlooked since it is quite frequently discovered by the meat inspectors in the slaughterhouses.

Insane in Czechoslovakia

Under the auspices of the sanitary section of the Bohemian provincial administration, a study on the population of the insane asylums has been published. The study, which covers twenty-five years, shows that increased facilities for housing the insane have not kept pace with the demand. The report attempts to explain this phenomenon. According to the law, only curable cases may be admitted to public insane asylums, and such incurable ones as may be dangerous to their surroundings. Psychiatry has extended the meaning of the term "insane" and thus the candidates for the asylums have increased. The improved sanitation in the insane asylums has considerably prolonged the life of the inmates, thus increasing the number to be cared for. Also the class of patients who are considered dangerous has been extended. The modern psychiatrist knows that a patient that is not dangerous to his surroundings might become so under adverse conditions, and therefore is more liberal in applying this term while certifying for admission of the insane. The relatives of the insane are more willing today to see members of their families going to a public institution. Although there is no direct proof that the increased burden of modern life has increased insanity, there are some indications of it. The administrator of insane asylums is confronted with a difficult problem that he will have to meet in the near future. While the modern psychiatrist wants to transform the insane asylums into hospitals for the treatment of curable paitents, he finds them overfilled with chronic patients who cannot be cured and who have to come to the institution for segregation. The report suggests the placing of the insane in families under proper supervision from the institution. The cost of erecting new institutions is such that all the insane could never be confined, and the institutions would never become places for the treatment of the curable patients.

Professional Secrecy and Public Health

The ministry of health and physical education has recently sent out a circular letter to all local health authorities on the professional secrecy of physicians dealing with public authorities. The hospital authorities have sometimes refused to give up copies of medical histories at the request of public authorities. The ministry decided that the hospital authorities are obliged to attach medical histories to requests for the payment of hospital fees from public funds and to documents dealing with the sickness and accident insurance of workmen. Because it is realized that through indiscretion of officials dealing with the documents serious material and moral damage could result to the person concerned, the ministry, in its circular letter, reminded the authorities that any indiscretion in these cases would be classed as a breach of professional secrecy and would be prosecuted as such. In case the documents should go to other than public health authorities, the medical histories should be taken out of the document and reattached to it only when it comes back into the hands of the health authorities.

BERLIN

(From Our Regular Correspondent)

May 9, 1925.

Health Conditions in Berlin

Infant mortality, which shortly before the war amounted to about 14 per cent. of the living births and which did not change materially during the war, remained almost stationary in the period after the war. In the year 1924, however, the infant mortality rate was barely 10 per cent., the lowest rate ever recorded for Berlin. The mortality rate of infants born in wedlock, 9.5 per cent., is considerably below the rate before the war (from 12 to 13 per cent.). The mortality rate of infants born out of wedlock is still high (20 per cent.), chiefly owing to the lack of suitable care-taking centers. During the period from 1920 to 1922, the mortality rate of illegitimate children rose to even 30 per cent. during the first year of life, as compared with 20 per cent. just previous to the war.

The incidence of acute infectious diseases has become rapidly less. In 1924 the number of cases in Berlin that came under this head was only 50 per cent. of the already low incidence for 1923. Scarcely 500 deaths from measles, scarlet fever, diphtheria, whooping cough, typhoid and dysentery, taken together, are recorded for Greater Berlin in 1924. The respiratory diseases (pneumonia, bronchitis and influenza), in spite of the influence of slight epidemics of influenza, as in 1922, show only a slightly greater incidence than during the prewar period.

That the mortality has remained stationary may be explained by the fact that the mortality among a certain group has increased. The mortality among the aged was augmented by the suffering due to the war and to the depreciation of the mark, and the year 1924 does not seem to show any improvement.

The high incidence of tuberculosis, which has been the subject of much discussion, does not seem to have affected the mortality rate in the manner one would expect. During the years just previous to the war, the mortality rate for tuberculosis in Berlin ranged from 18 to 20 per 10,000 population. In 1921, after a marked increase during the war (above 32 in 1918), the mortality from tuberculosis reached its previous minimum (17 per 10,000 population), but it rose again and was above 20 in 1923. In 1924, however, it dropped again to about 16. This is the lowest mortality rate for tuberculosis ever recorded for Berlin.

The number of births in Berlin has not risen much above the low level for 1923, which was 9.6 living births per thousand population. During the years just preceding the war, the rate ranged from 19 to 20 per thousand population, dropped in 1917 to 10.7, and reached, after the disbandment of the army, in 1920 the highest rate recorded since the war (17.3). Inflation of the currency and the resulting depreciation of the mark caused the birth rate to drop to 9.6 by 1923.

The effects of the continued low birth rate on the census returns for Berlin have been considerable, for, in 1922, the excess of deaths over births was 8,000; in 1923, 11,000, and in 1924, 6,000. It is evident, therefore, that Berlin's increase in population during recent years must be due solely to immigration, which, even since inflation is a thing of the past, has not abated to any extent. The statistics of the chief cities of other countries show that the mortality from tuberculosis and infant mortality are considerably lower than in Berlin. The birth rate of other chief cities is, in fact, usually twice as high as in Berlin (London, New York; and even Paris has considerable of an excess of births over deaths).

If the birth rate in Berlin does not increase, a decrease in the population cannot be prevented, for the deficit cannot be covered indefinitely solely through immigration, especially when it is recalled that the excess of births over deaths for

Germany as a whole is now only 0.8 per thousand population, as compared with 1.2 per year just previous to the war.

Seasonal Differences in the Infant Mortality Rate

According to the observations recently published by the city physician Guradze, in place of the well known summer peak in the infant mortality curve a winter peak is becoming noticeable. In Table 1 will be found the mortality rates for the four quarters of 1913, 1921, 1922 and 1923, for infants under 1 year of age.

TABLE 1.—*Comparative Infant Mortality Rates (Germany)*

	1913	1921	1922	1923
First quarter	14.25	13.12	14.15	14.59
Second quarter	14.65	11.40	13.15	11.77
Third quarter	16.63	16.16	11.80	13.88
Fourth quarter	14.82	12.95	12.69	12.46
Average	15.10	13.38	13.00	13.20

In contradistinction to 1913 and 1921, in which years the peak of the mortality curve fell in the summer quarter (July to September), it will be observed that in 1922 and 1923 the apex is reached in the winter quarter (January to March). This peculiar reverse is even more noticeable for Berlin than it is for Germany as a whole. In Old Berlin, during the period from 1913 to 1922, it has been noted that a winter peak rather than a summer peak occurs in seven of the years; namely, 1915, 1916, and 1918 to 1922. In 1915, 1916, and 1919 to 1922, the first quarter (January to March) shows the highest mortality, but in 1918 it is the fourth quarter (October to December). In 1914 and 1917, on the other hand, the highest mortality falls in the third quarter (July to September), and in 1913 in the second quarter (April to June). Comparing the individual calendar months of the years 1922 and 1923, it is observable that in New Berlin the highest mortality falls in February.

TABLE 2.—*Infant Mortality Rate for New Berlin, 1922-1924*

	1922	1923	1924
January	149	147	109
February	208	169	127
March	166	151	134
April	137	129	118
May	124	124	115
June	98	103	...
July	94	91	...
August	111	84	...
September	104	92	...
October	100	89	...
November	120	86	...
December	141	106	...

The peak each year falls in the winter; the lowest mortality in 1922 was in July, and in 1923 in August.

In connection with the winter peak, it may be observed that there is an increased mortality from pneumonia, which overrides for the time being gastro-intestinal diseases. There is no doubt that the increased incidence of respiratory diseases among adults during the winter season adds to the danger of infection for infants; but, in addition, it is more than likely that the scarcity and high price of coal plays a part; also the scarcity of suitable dwellings and the constantly rising rents.

If we compare the years 1913 to 1922 and arrange the quarters in descending order, according to the number of deaths occurring among infants under 1 year, we get for Old Berlin the following arrangement: I, III, IV, II. If, however, we consider only the first three months of life, and arrange again the quarters in descending order, according to the number of deaths occurring among infants under 3 months old, we get a somewhat different arrangement; namely, I, IV, III, II. This difference is doubtless due to the fact that the summer brings greater dangers to the older infants who are receiving more cow's milk than to the infants under 3 months old who, for the most part, are breast fed.

Health Conditions in Prussia

A statistical report issued by the Prussian ministry of public welfare shows a decreasing incidence of transmissible diseases. The mortality (per 10,000 population) of various diseases for the second six months of 1924 was: typhoid, 0.24; scarlet fever, 0.14; diphtheria, 0.6; measles, 0.26; whooping cough, 1.00; tuberculosis (0-15 age group), 13.6; pneumonia, 10.6; influenza, 3.6. The general mortality rate for Prussia for the first six months of 1924 was 12.7, which was considerably lower than the rate for 1923 (14.7 for the first six months; 13.5 for the whole year); in fact, it is the lowest rate ever recorded. Also the large cities of Germany had, for the first three quarters of 1924, the unusually low rate of 10.8, as compared with 12.3 in the third quarter of 1923 and 11.9 for the whole year, 1923.

On the other hand, the number of marriages and the number of births point plainly to the persisting bad economic conditions. The number of marriages increased during the first few years following the war, but since then there has been a steady decrease, in the main. In Prussia the number of marriages per thousand of population for the year 1923 was 9.42, which was a higher rate than for the last year of peace (1913), which was 7.8, but for the first six months of 1924 it dropped to 6.46 under peace conditions. In the large cities of Germany, the rate for the first three quarters of 1924 was 7.2, as compared with 10.5 for the corresponding period of 1923 and 10.4 for the whole year, 1923.

The number of living births recorded in Prussia during the first two quarters of 1924 was 20.6, as compared with 21.6 for the first two quarters of 1923 and 20.47 for the complete year, 1923. In the large cities of Germany the number of living births for the first three quarters of 1924 was 14.1, as against 14.7 for the corresponding period of 1923, or 14.2 for the whole year 1923. It was peculiar that in the large cities the number of births for the third quarter of 1924 was greater than for the third quarter of 1923; namely, 55,882, or 13.4 per thousand, as compared with 55,290, or 13.3 per thousand, for, during recent years, the number of births had decreased regularly from quarter to quarter, without a second summer peak. Whether this is due to mere chance or marks the beginning of an improvement, remains to be seen.

In Prussia there is an indication of an excess of births over deaths of 8.0, as compared with 6.8 for the year 1923, and, in the large cities of Germany, an excess of 3.3 as against 2.3 for 1923.

Of the group affections, only the diseases of the circulatory organs showed a higher mortality rate in the first two quarters of 1924 than in the first half of 1923 (17.8 as against 17.4).

The mortality from tuberculosis shows a greater decrease in the second quarter of 1924 than in the first. The number of deaths from tuberculosis in Prussia was 26,545, or 13.6 per 10,000 of population, which corresponds to the mortality of the last year preceding the war (1913) and is only slightly higher than the lowest mortality that tuberculosis has shown (13.48 in 1921, a sudden drop after the maximum reached in 1918). The increase recorded in 1922 and 1923 has now been equalized. In the large cities of Germany, the number of deaths from tuberculosis in the first three quarters of 1924 was 17,557, or 14 per 10,000 of population, as compared with 22,723 deaths, or 18.3 per 10,000 of population in the first three quarters of 1923. The proportion of children of the 0-15 year age group in 1924 was 1,855, or 1.5 per 10,000, and in 1923 was 2,705, or 2.3 per 10,000. It should be observed also that the number of cases of tuberculosis in the third quarter of 1924 was especially low (4,633, or 11 per 10,000; 465, or 1.1 per 10,000, for the 0-15 year age group).

The infant mortality for Prussia for the first half of 1924 was 10.65 per cent., as against 13.15 per cent. in the first half of 1923. The cities and the rural districts stood in the relation of 10.8 to 10.5. In the large cities of Germany, the infant mortality for the first three quarters of 1924 was 10.2 per cent., as compared with 13.5 per cent. in 1923. Artificial feeding was seriously impaired by the high price of milk, with a resulting marked increase in the number of undernourished infants in certain sections. For example, in the Saal region, 50 per cent. of the infants were so designated, and in the city of Neisse, even 60 per cent. Inadequate care of the body caused many dermal affections, especially among children. Infestation with vermin has been frequent, and it was found that the neglect of the children was usually due to the economic distress. Rickets is still prevalent among infants. In Liegnitz, 30 per cent. were affected; in Marienburg, 40 per cent., and in Wandsbek and the vicinity of Merseburg, 50 per cent. Infantile scurvy was not so widespread as it was in 1923. There are no exact statistics as to the incidence of scrofula and tuberculosis among infants. Children of the 1-6 age group have lived in a period of want ever since birth. The average weight and the average height are below normal. Anemia, rickets, scrofula and tuberculosis have increased. Investigations in certain schools of Coblenz showed a good state of nutrition in 10 per cent., a moderate state of nutrition in 36 per cent., and an undernourished state in 54 per cent. As to the incidence of rickets, reports from different cities vary greatly: Sagan, 24.4 per cent.; Cassel, 52 per cent.; Coblenz, 53 per cent.; Düsseldorf, 80 per cent.; Marienburg, 10 per cent.; Minden, 11.4 per cent. (among 2,641 children of the 1-6 age group); and in Halle, 4.4 per cent. in a group of 4,043 children; among these 0.5 per cent. are severely affected. The number of cases of severe rickets (as was the condition among infants) is apparently more numerous than formerly. In various sections, from 8 to 17 per cent. were affected with anemia, and from 5.3 to 30.5 per cent. with scrofula.

Of 99,081 school children studied in various towns and townships of Prussia, a good state of nutrition was found in 32.14 per cent.; an average condition in 43.1 per cent., and a state of malnutrition in 24.7 per cent. The height and weight of the children were in many instances below normal. Late rickets is still frequent; in Paderborn, 12.3 per cent. and in Coblenz 18.5 per cent. of the children were thus affected. Aside from malformation of the bones, late rickets finds its expression in delayed and defective dentition, so that a large proportion of the school children have poor teeth. Scrofula is of common occurrence. The spread of tuberculosis remains the most significant fact. Taking the average of sixteen large cities, it was estimated that in 1921 about 0.9 per cent. of the school children were suffering from frank pulmonary tuberculosis. Statistics collected by the ministry of public welfare gave, for 1922, 3 per cent. and, for 1923, 3.27 per cent. as so affected.

Marriages

JOHN GILLETTE BURNS, Cuero, Texas, to Miss Alice von Roeder of New York, at Austin, Texas, May 4.

STEPHEN DANA WEEDER to Miss Caroline Denny Nixon, both of Philadelphia, April 16.

ERIC MILTON MATSNER to Miss Florence Valdez, both of New York, June 6.

CHARLES CARROLL LUND to Miss Alice Clark Marden, both of Boston, May 22.

BENJAMIN PRESS to Miss Rose Lipshitz, both of Brooklyn, April 23.

Deaths

Charles Homer Ball ⊕ Tulsa, Okla.; St. Louis University School of Medicine, 1906; member of the Radiological Society of North America; past president of the Tulsa County Medical Society; formerly vice president and councillor of the Oklahoma State Medical Association; for ten years on the staff of the St. Louis Skin and Cancer Hospital, now the Barnard Free Skin and Cancer Hospital; aged 57; died suddenly, May 12, of cerebral hemorrhage.

William Meredith Gibson, Cazenovia, N. Y.; Medical Department of the University of the City of New York, 1878; member of the Medical Society of the State of New York; health commissioner of Utica, N. Y., 1884-1889; manager of the New York State Hospital for Insane, 1894-1895; school commissioner of Utica, 1898-1904; formerly physician to St. Luke's and St. Elizabeth's hospitals; aged 69; died, May 18.

Charles Hunt Powell ⊕ Pocahontas, Ill.; St. Louis Medical College, 1887; formerly professor of principles of medicine, physical diagnosis and clinical medicine, Barnes Medical College, St. Louis, and professor of medicine, Reliance Medical College, Chicago; served in the M. C., U. S. Army, with the rank of captain, during the World War; aged 62; died, May 12, of nephritis.

William J. Gillette ⊕ Toledo, Ohio; Western Reserve University School of Medicine, Cleveland, 1879; member of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons; formerly professor of surgery and clinical surgery, Toledo Medical College; on the staff of the Robinwood Avenue Hospital; aged 67; died, May 13, of heart disease.

William W. Chaffin ⊕ Pulaski, Va.; Jefferson Medical College of Philadelphia, 1893; past president of the Medical Society of Virginia; member of the state board of medical examiners; county coroner; formerly member of the town council; physician in charge of the Pulaski Hospital; aged 56; died suddenly, May 7, of heart disease.

John Daniel Sullivan ⊕ Brooklyn; Medical Department of the University of the City of New York, 1867; president of the Medical Society of the County of Kings, 1892; formerly on the staffs of the Fever Hospital, New York, St. John's Home and St. Mary's Hospital, Brooklyn; aged 84; died, May 15, of chronic myocarditis.

Jacob Cole Price, Montclair, N. J.; Long Island College Hospital, Brooklyn, 1874; secretary and director of the New Jersey State Health Department for twelve years; served at different times as state senator; formerly mayor and postmaster of Branchville; for fifteen years county physician; aged 74; died, May 17.

Charles Francis Canedy ⊕ Greenfield, Mass.; Medical School of Harvard University, Boston, 1900; served in the M. C., U. S. Army, with the rank of captain, during the World War; on the staff of the Franklin County Public Hospital, where he died, May 5, following an appendectomy; aged 48.

Frederick Jerome Ripley, Brockton, Mass.; Medical School of Harvard University, Boston, 1883; member of the Massachusetts Medical Society; for many years member of the city board of health; formerly on the staff of the Brockton Hospital; aged 67; died, in May, following a long illness.

Fred Thomas Kidder ⊕ Woodstock, Vt.; University of Vermont College of Medicine, Burlington, 1883; formerly president of the Vermont State Medical Society; chairman and past president of the Vermont State Board of Health; aged 66; died, May 10, of heart disease.

Ellis Micheau, Baltimore; College of Physicians and Surgeons, Baltimore, 1875; member of the Medical and Chirurgical Faculty of Maryland; aged 64; died, February 15, at the Franklin Square Hospital, of arteriosclerosis, heart disease and nephritis.

Arthur Noel Smith ⊕ Dover, N. H.; Medical School of Maine, Portland, 1872; past president and secretary of the Strafford County Medical Society; member and chairman of the school board; aged 73; died, April 23, of heart disease.

John B. Birchett, Cardwell, Mo.; Louisville (Ky.) Medical College, 1884; member of the Missouri State Medical Association; veteran of the Spanish-American and World wars; aged 61; died, April 18, at St. Louis, of heart disease.

⊕ Indicates "Fellow" of the American Medical Association.

Royce Brewster Josselyn ⊕ Portland, Me.; Bowdoin Medical School, Portland, 1917; member of the New England Dermatological Society; aged 36; died, May 2, at the Maine Eye and Ear Infirmary, as the result of a burn.

James A. Gladstone, Andes, N. Y.; Medical Department of Columbia College, New York, 1872; member of the Medical Society of the State of New York; Civil War veteran; died, May 6, of carcinoma of the stomach.

Joseph M. F. Egan, New York; Medical Department of the University of the City of New York, 1852; member of the Medical Society of the State of New York; aged 67; died, May 9, of gastric ulcer.

David Bradley Neely ⊕ St. Petersburg, Fla.; University of Toronto Faculty of Medicine, Toronto, Ont., Canada, 1899; formerly a practitioner in Canada; aged 51; died, May 3, of heart disease.

M. D. Lewis, Eunice, La.; Medical Department of the Tulane University of Louisiana, New Orleans, 1886; medical director of the Eunice Sanitarium Company; aged 52; died, May 2, of tuberculosis.

John Anderson Springle, Montreal, Que., Canada; McGill University Faculty of Medicine, 1888; aged 61; died, April 8, at the Western Hospital, of septicemia, following an appendectomy.

Will Huntington Woodworth ⊕ Philadelphia; College of Physicians and Surgeons, Baltimore, 1890; member of the Medical Society of New Jersey; aged 59; died, May 5, of heart disease.

Webster Clark Martin, Scottville, Mich.; University of Michigan Medical School, Ann Arbor, 1892; formerly mayor of Scottville; member of the school board; aged 57; died, in May.

Samuel H. Moseley, Ebony, Va.; University College of Medicine, Richmond, 1899; member of the Medical Society of Virginia; aged 51; died, April 26, following a long illness.

Frederick William Werner ⊕ Joliet, Ill.; Bellevue Hospital Medical College, New York, 1880; member of the American College of Physicians; aged 67; died, May 3, of heart disease.

Albert T. May, St. Louis; Washington University Medical School, St. Louis, 1902; aged 50; died, April 29, at the St. Louis Baptist Hospital, of hemorrhage of the stomach.

Elias M. Wilkinson, Clinchfield, Va.; University of Maryland School of Medicine, Baltimore, 1888; member of the Medical Society of Virginia; aged 63; died, April 10.

William Henry Macdonald, Medicine Hat, Alta., Canada; Dalhousie University Faculty of Medicine, Halifax, N. S., 1895; aged 51; died suddenly, recently, of heart disease.

Albert Frederick Graf, Los Angeles; Medico-Chirurgical College of Philadelphia, 1893; Spanish-American War veteran; aged 50; died suddenly, May 4, of heart disease.

George R. Welchans, Lancaster, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1867; aged 80; died recently, at the Masonic Home, Elizabethtown.

Earl L. McDaniel ⊕ Philadelphia; University of Pennsylvania School of Medicine, Philadelphia, 1894; on the staff of the Samaritan Hospital; aged 56; died, April 28.

Thomas Joseph Lawler, Boston; Medical School of Harvard University, Boston, 1882; aged 65; died, April 27, at his home in Winthrop, Mass., of heart disease.

John F. Yost, Holtwood, Pa.; Jefferson Medical College of Philadelphia, 1867; member of the Medical Society of the State of Pennsylvania; aged 84; died recently.

Harry Clay Roberts ⊕ Coats, N. C.; Tulane University of Louisiana School of Medicine, 1912; aged 42; died, April 28, of injuries received in an aeroplane accident.

Isom Earl Gladden, Kiefer, Okla.; Kentucky School of Medicine, Louisville, 1907; aged 39; died, April 24, at the Morningside Hospital, Tulsa, of appendicitis.

Carl Meach McCuiston, Petersburg, Va.; Medical College of Virginia, Richmond, 1915; member of the Medical Society of Virginia; aged 34; died, April 30.

John James Berry ⊕ New Castle, N. H.; Medical Department of the University of the City of New York, 1878; aged 66; died, April 22, of angina pectoris.

James Fulton Williams ⊕ Charlottesville, Va.; University of Maryland School of Medicine, Baltimore, 1899; aged 52; died, May 1, following a long illness.

John H. Lesh, Newton Center, Mass.; University of Pennsylvania School of Medicine, Philadelphia, 1866; aged 78; died, April 7, of cerebral hemorrhage.

Oliver Jacob Dellett, Indianapolis; Eclectic Medical College of Indiana, Indianapolis, 1893; aged 73; died, April 29, of influenza and acute myocarditis.

James E. Augustus Siske, Pleasant Garden, N. C.; North Carolina Medical College, Charlotte, 1902; aged 52; died, April 30, following a long illness.

William B. Taylor, Jonesboro, Tenn.; University of Tennessee College of Medicine, Memphis, 1888; aged 65; died, April 28, of chronic nephritis.

Walter A. Hodges, Iuka, Miss.; Vanderbilt University Medical Department, Nashville, Tenn., 1880; aged 68; died, April 17, of diabetes mellitus.

Lemuel H. Collins, Powellville, Md.; Washington University School of Medicine, Baltimore, 1873; aged 78; died, April 21, of heart disease.

William Sheldon Hutchins, Uhrichsville, Ohio; Western Reserve University School of Medicine, Cleveland, 1886; aged 89; died, in May.

Amos J. Myers, Creston, Iowa; Hahnemann Medical College and Hospital, Chicago, 1879; aged 71; died, May 1, of cerebral hemorrhage.

Jacob E. Brouse, Vancouver, B. C., Canada; McGill University Faculty of Medicine, Montreal, Que., 1892; aged 57; died, February 17.

Edward James Horan ⊕ Glenwood Springs, Colo.; University of Vermont College of Medicine, Burlington, 1895; aged 54; died recently.

Fred A. Rice, Everett, Wash.; Bellevue Hospital Medical College, New York, 1876; aged 69; died, April 15, following a long illness.

William Alphonsus Dillon, St. Louis; Washington University Medical School, St. Louis, 1901; aged 45; was shot and killed, May 1.

Crawford W. Starnes, Greenville, Tenn.; Maryland Medical College, Baltimore, 1901; aged 65; died, April 22, of valvular heart disease.

John Mayer, Osmond, Neb.; Ensworth Medical College, St. Joseph, 1895; died suddenly, May 3, of cerebral hemorrhage.

J. H. Willis, River Junction, Fla.; Louisville (Ky.) Medical College, 1898; aged 53; died, in April, of dilatation of the heart.

John Berry Lee, Chattanooga, Tenn.; Chattanooga Medical College, 1892; aged 69; died, April 24, of carcinoma of the intestine.

Samuel J. Mellow, Port Perry, Ont., Canada; Queen's University Faculty of Medicine, Kingston, 1886; died, March 4.

Edward Carleton Atwood, Daytona, Fla.; Long Island College Hospital, Brooklyn, 1874; aged 76; died, August 17, at Boston.

Benjamin I. Barbee, Columbus, Ohio; Pulte Medical College, Cincinnati, 1880; aged 72; died, April 29, of heart disease.

B. Frank Thomas, New York; Eclectic Medical College of the City of New York, 1878; aged 80; died, April 27, of senility.

Griffin J. Baker, Jr. ⊕ Marion, Ill.; Missouri Medical College, St. Louis, 1894; aged 55; died, April 23, of influenza.

Sylvanis Koontz, Roanoke, Ind.; Fort Wayne College of Medicine, 1884; aged 80; died, May 1, of heart disease.

E. Dare Woodruff, Salt Lake City, Utah; Chicago Homeopathic Medical College, 1879; aged 75; died, April 10.

James Mann, Renfrew, Ont., Canada; Queen's University Faculty of Medicine, Kingston, 1869; died, March 9.

Daniel H. Lockard, Plymouth, Pa.; Jefferson Medical College of Philadelphia, 1880; aged 73; died, April 20.

Stephen Marcellus Cook, Cygnet, Ohio; Medical College of Ohio, Cincinnati, 1871; aged 79; died, April 12.

Samuel Wilson Otis, Carmel, Maine; Medical School of Maine, Portland, 1879; aged 72; died, April 19.

Harvey V. Varner ⊕ Clarksburg, W. Va.; Baltimore Medical College, 1903; aged 52; died, March 18.

Daniel W. Scott, McDonough, Ga.; Atlanta Medical College, 1875; aged 75; died, May 3.

Charles A. Barnes, Seattle, Rush Medical College, Chicago, 1870; aged 88; died, April 26.

Frank Swope, Nashville, Tenn. (licensed, Tennessee, 1889); aged 73; died, April 28.

The Propaganda for Reform

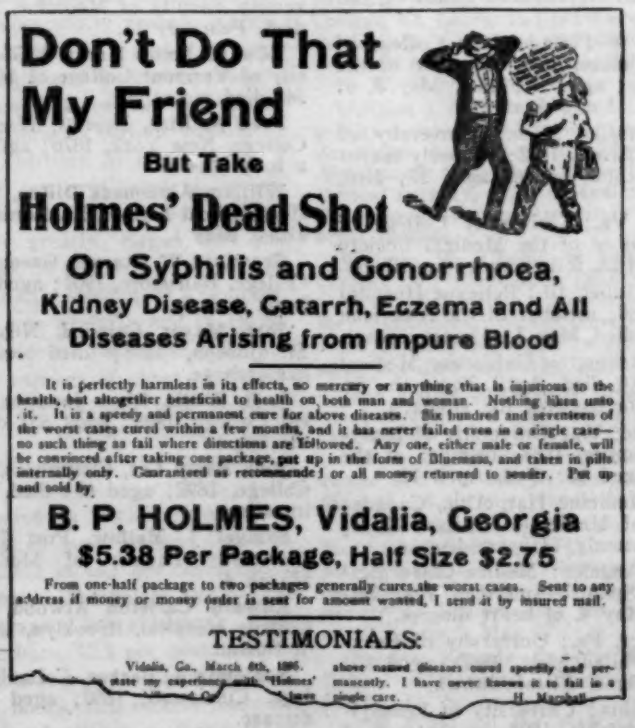
IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

HOLMES' DEAD SHOT

A Fraudulent Nostrum for Syphilis and Gonorrhea Denied the Use of the Mails

On April 30, 1925, Benjamin P. Holmes of Vidalia, Georgia, was debarred from the use of the mails, and the postmaster at Vidalia was instructed to return to the senders all letters that came addressed to Holmes with the word "Fraudulent" plainly written or stamped on the outside of such letters.

On February 21, 1925, B. P. Holmes was called on by the Post Office Department to show cause on March 7, 1925, why a fraud order should not be issued against him. Holmes himself made no appearance at Washington but sent his attorneys, and the case was taken up for hearing on the date set. At the conclusion of the hearing the postal authorities asked Holmes' attorneys whether, in view of the fact that a fraud order would embarrass their client in the receipt of personal mail that was in no way connected with the alleged syphilis cure business, they would prefer to file an affidavit agreeing absolutely to discontinue the business rather than have a fraud order issued against him. Holmes' attorneys declared that they thought their client would adopt that course, and the usual form of affidavit was furnished for excution by Holmes, who was given until March 20 to file it. On March 15 the attorneys for Holmes asked that an extension of sixty days be allowed in the filing. This request was denied, but the time was extended to April 7.


Don't Do That
My Friend
But Take
Holmes' Dead Shot
On Syphilis and Gonorrhoea,
Kidney Disease, Catarrh, Eczema and All
Diseases Arising from Impure Blood
It is perfectly harmless in its effects, no mercury or anything that is injurious to the health, but altogether beneficial to health on both man and woman. Nothing liken unto it. It is a speedy and permanent cure for above diseases. Six hundred and seventeen of the worst cases cured within a few months, and it has never failed even in a single case—no such thing as fail where directions are followed. Any one, either male or female, will be convinced after taking one package, put up in the form of Bluemass, and taken in pills internally only. Guaranteed as recommended or all money returned to sender. Put up and sold by
B. P. HOLMES, Vidalia, Georgia
$5.38 Per Package, Half Size $2.75
From one-half package to two packages generally cures the worst cases. Sent to any address if money or money order is sent for amount wanted, I send it by insured mail.
TESTIMONIALS:
Vidalia, Ga., March 6th, 1895.
above named diseases cured speedily and permanently. I have never known it to fail in a
single case.
H. Marshall

On April 1 Holmes' attorneys asked that their client be permitted to file an affidavit to the effect that he would discontinue using any advertising matter in connection with the sale of his medicine, but apparently would not discontinue the sale of the product. In the event that this proposal was not satisfactory they asked that the matter be reopened for further hearing. Holmes was notified through his attorneys that neither suggestion was acceptable. Nothing further has been heard from the attorneys or Holmes, and as a result Judge H. J. Donnelly, Acting Solicitor for the Post Office Department, sent a Memorandum to the Postmaster General recommending the issuance of a fraud order. In his memorandum Judge Donnelly says in part:

"Benjamin P. Holmes is a farmer residing about eight miles from Vidalia, Georgia. He is about 75 years of age. He is not a physician. He stated in his answer that he was for a number of years engaged in the Naval Stores business, and that while so engaged he employed a large number of Negroes, the majority of whom, he states, were affected with syphilis and gonorrhea. He stated that he used his medicine known as 'Holmes' Dead Shot' in these cases and in no case failed to bring about a cure.

"The business herein involved is the sale by Holmes through the mails of his preparation known as 'Holmes' Dead Shot' for the cure of 'Syphilis, Gonorrhea, Kidney Diseases, Catarrh, Eczema, and all diseases arising from impure blood.' Holmes advertises his preparation by means of a printed circular on the top of which is depicted a man in the act of shooting himself in the head, with another man asking him not to kill himself but to take 'Holmes' Dead Shot.'"

The memorandum further states that a post office inspector obtained a sample of "Holmes' Dead Shot" by correspondence through the mails. The preparation was put up in a crude manner in a small tin snuff box, and the product itself was a black pasty mixture with a very strong odor of tar. It was analyzed by the Bureau of Chemistry of the Department of Agriculture, and the report of the bureau is in part as follows:

"Pine tar	35.4 per cent.
"Volatile oil	21.9 per cent.
"Vegetable drug	23.5 per cent.
"Ferrous Sulphate	8.2 per cent.
"Copper "	6.2 per cent.
"Drug Extractives (by difference)	4.8 per cent.

"Vegetable drug, 23.5 per cent., is chiefly powdered cubeb berries. The drug extractives do not contain any ingredient of recognized therapeutic value in the above diseases. The drug was also tested for the presence of compounds of mercury, silver, arsenic and the iodides with negative results."

The memorandum then contains a somewhat detailed report on the preparation from a chemical standpoint, made by Dr. L. F. Kebler of the Bureau of Chemistry, who is himself a physician and drug expert. Needless to say, Dr. Kebler reported in effect that this mixture of tar, cubebs, green vitriol and blue vitriol is utterly worthless as a treatment for either syphilis or gonorrhea. Based on this evidence, Judge Donnelly's memorandum to the Postmaster General goes on to state:

"The futility of attempting to kill the spirochaeta pallida by the administration of a preparation consisting principally of pine tar and powdered cubeb berries is not open to question. For several years past the United States Congress and the various State Legislatures have appropriated lage sums of money for the administration of the recognized treatments for syphilis in an endeavor to stamp out this plague. Millions of doses of these preparations have been administered under the supervision of the United States Public Health Service and the Health Departments of the various States. Nostrums such as that under consideration are a menace to society in that the ignorant and credulous rely on them as sure cures for these horrible diseases.

"In this instance a farmer of very little education, who knows nothing about the diagnosis and treatment of disease, sets himself up as able to cure the dread disease of syphilis with a preparation concocted by himself. He relies on the statements of persons who take the medicine as his proof that it will do what he claims for it. The unreliability of testimonials of laymen in matters of this kind has been repeatedly demonstrated in numerous cases before this office in the past. A large number of nostrums for the cure of syphilis and gonorrhea have been before this office and numerous fraud orders have been issued against the promoters.

"At the hearing before this office counsel for the respondent attempted to show that his client was acting in good faith in the sale of his preparation through the mails under the above mentioned representations. He submitted affidavits from persons living in Vidalia, Georgia, and vicinity showing that Mr. Holmes bears a good reputation in that community.

Counsel did not attempt to controvert the expert testimony offered on behalf of the Government.

"As hereinbefore pointed out, in view of the respondent's age and his standing in his local community he was afforded an opportunity to absolutely discontinue the operation of this scheme through the mails. He has declined to avail himself of this opportunity.

"The evidence in this case shows that the pretenses, representations and promises under which Holmes is selling his preparation through the mails are false and fraudulent.

"The determination of the respondent to continue the sale of his preparation through the mails under the representations heretofore made, after he has been charged with the falsity of those representations and confronted with the evidence produced by the Government, tends to show his lack of good faith."

In view of these facts Judge Donnelly recommended the issuance of a fraud order against Benjamin P. Holmes. As already stated, Postmaster General Harry S. New issued such an order on April 30 this year.

Correspondence

"ROTARY VERSION OF POMEROY"

To the Editor:—In THE JOURNAL, May 9, I find in Queries and Minor Notes, page 1445, a note on "Rotary Version of Pomeroy." In October, 1922, I published in the *Florida State Medical Journal* an article entitled "Some Methods of Delivery of Occiput Posterior" in which is described the same maneuver referred to in the current issue of THE JOURNAL, as "Pomeroy's rotary version." About twenty-five years ago, while residing at Richburg Allegany County, N. Y., I published in the *Journal of the New York State Medical Association* (before the consolidation) a few paragraphs describing the same operation. I regret that a copy is not now available, and that I have not the date of publication. The method described is very successful.

E. W. AYARS, M.D., Coconut Grove, Fla.

CANCER IN JAPAN

To the Editor:—The following statistics have been derived from a recent official publication on the vital statistics of Japan. They reemphasize the statement frequently made that the cancer death rate of Japan is gradually approaching that of European countries. It is significant, however, that the rate should be practically the same for males and females, but for cancer of the stomach and liver the rate was decidedly higher. Of particular interest is the very low mortality from cancer of the female breast, which is about one eighth of the rate prevailing in this country, England and Wales. I have fortunately had occasion to point out that no exhaustive study has ever been made to explain the low relative incidence of cancer of the female breast in the Japanese population. Much the same condition prevails in the Hawaiian Islands and among the Japanese on the Pacific Coast. Of considerable importance is the higher incidence of cancer of the stomach and liver among Japanese males when compared with Japanese females. Particularly suggestive is the high rate of frequency of cancer of the esophagus, which for males is shown to be 6.1 per hundred thousand and for females, 2.3. It would make an interesting comparison if corresponding statistics could be obtained for even a small section of the Chinese population.

Cancer in Japan in 1922

	Males		Females		Total	
	Number	Per 100,000	Number	Per 100,000	Number	Per 100,000
Buccal cavity	662	2.3	238	0.8	900	1.6
Stomach and liver	15,384	53.2	9,630	33.5	25,014	43.4
Peritoneum and intestines	1,059	3.7	1,034	3.6	2,093	3.6
Female genital organs	...	...	6,464	22.5	6,464	11.2
Female breast	...	...	570	2.0	570	1.0
Skin	182	0.6	111	0.4	293	0.5
Other organs or parts	2,915	10.1	1,427	5.0	4,342	7.5
Esophagus	(1,751)	6.1	(675)	...	(2,426)	...
Not specified	142	0.5	128	0.4	270	0.5
	20,344	70.4	19,602	68.1	39,946	69.3
	Population, 28,891,000		Population, 28,764,000		Population, 57,655,000	

FREDERICK L. HOFFMAN, Newark, N. J.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SEX OF HOMOLOGOUS TWINS

To the Editor:—In reading an article on twins in the April issue of *Hygeia*, I note the statement, which is also made in many of the textbooks, that "twins that arise from a single cell are always of the same sex." In an instance that came under my observation, April 9, of a girl and a boy, there was one placenta, the twins were enclosed in one sac, with a partition, there was apparently one chorion, and one decidua, but there were two amnions. This seemed to be an instance of homologous twins, one of each sex. If twins from the same ovum are always of the same sex, it would appear that the determination of sex resided wholly within the ovum? Is this substantiated?

W. F. WILSON, M.D., Lake City, Minn.

ANSWER.—The occurrence of one-egg twins, one of each sex, is physically possible but improbable in the extreme. Although fetuses and new-born twins have been observed in large numbers by expert gynecologists, no exception to the rule that the two members of a pair are of the same sex has ever been reported. There are, however, many reports of compound placentas resulting from the more or less intimate fusion of two originally separate placentas. Such placentas are easy to distinguish from true single placentas by their form and by the distribution of the placental blood vessels. Sometimes the fusion is so intimate that the chorions are also involved and an apparent monochorial condition results. In passing, it might be of interest to note that a species of armadillo, *Euphractus villosus*, almost regularly produces two-egg twins that are either of the same sex or of opposite sexes, yet the two chorions are so completely fused that they appear to be but one simple chorion. Only a study of the early embryology reveals the fallacy. This situation should teach us to be on our guard against the error of assuming that a monochorial condition implies one-egg (monozygotic) origin of twins.

There is, nevertheless, a remote possibility that a pair of twins of opposite sexes might result from the same sort of chromosomal aberration during the first or second cleavage division as is supposed to occur in the production of gynandromorphs (individuals that are male in one half and female in the other half of the body). Gynandromorphism has never, to our knowledge, been observed in mammals, but is fairly common in birds and in insects. If chromosomal nondisjunction chanced to be coincident with twinning, there is a possibility of the production of a pair of monozygotic twins of opposite sexes; but there seems to be no other reasonable explanation of such an occurrence.

AMYL NITRITE IN TREATMENT OF SKIN AFFECTIONS

To the Editor:—In THE JOURNAL, April 18, page 1241, an article by Winkler on the curative action of amyl nitrite in skin affections was abstracted. I am anxious to know how much amyl nitrite has to be inhaled and how often, and how often the external application has to be repeated.

A. G. S. ROBERTS, M.D., Morton Grove, Ill.

ANSWER.—Winkler gives no details of dosage, but seems to have followed in Berend's footsteps. The latter gave infants with the exudative diathesis and eczema 2 drops to inhale in five or ten seconds, and three or four minutes later increased the dose and duration of the inhalation. The infant thus inhales a total of from 3 to 10 drops in the course of from twenty to fifty seconds. The maximum is 5 drops for

an infant under 2 months old. Different infants react differently, but all seem to be relatively more tolerant than adults. In seventy-five infants, the skin became red in all but five, and these were all in extreme malnutrition. Winkler expresses surprise that the local action of amyl nitrite has not been utilized before in dermatology. He rubs it in as a fluid, or as a 10 per cent. petrolatum ointment, or applies a layer of cotton dipped in the fluid. The application on cotton always gave surprising relief in pruritus; and persons with Dupuytren's contracture found that they could extend their fingers. He does not mention how often the applications are made, but cites the literature; N. Berend's article was published during the war in the *Monatschrift für Kinderheilkunde* **14**:417, 1918.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALABAMA: Montgomery, July 13. Ch., Dr. Samuel W. Welch, Montgomery.

ARIZONA: Phoenix, July 7-8. Sec., Dr. W. O. Sweek, 404 Heard Bldg., Phoenix.

CALIFORNIA: Los Angeles, June 15-18; San Francisco, July 6-9. Sec., Dr. Charles B. Pinkham, 906 Forum Bldg., Sacramento.

COLORADO: Denver, July 7. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

CONNECTICUT: Hartford, July 14-15. Sec., Reg. Bd., Dr. Robert L. Rowley, 79 Elm St., Hartford.

CONNECTICUT: New Haven, July 14. Sec., Homeo. Bd., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven.

DELAWARE: Wilmington, June 16-18. Sec., Medical Council, Dr. H. W. Briggs, 1026 Jackson St., Wilmington.

DISTRICT OF COLUMBIA: Washington, July 14. Sec., Dr. Edgar P. Copeland, Stoneleigh Court, Washington.

FLORIDA: Tampa, June 15-16. Sec., Dr. William M. Rowlett, Citizens Bank Bldg., Tampa.

GEORGIA: Atlanta, June 10-12. Sec., Dr. C. T. Nolan, Marietta.

HAWAII: Honolulu, July 13. Sec., Dr. G. C. Milnor, 401 S. Beretania St., Honolulu.

ILLINOIS: Chicago, April 14-16. Supt. of Regis., Mr. V. C. Michels, Springfield.

INDIANA: Indianapolis, July 14-16. Sec., Dr. W. T. Gott, 333 State House, Indianapolis.

KANSAS: Kansas City, June 16. Sec., Dr. Albert S. Ross, Sabetha.

KENTUCKY: Louisville, June 9-11. Sec., Dr. A. T. McCormack, State Board of Health Bldg., Louisville.

LOUISIANA: New Orleans, June 11-13. Sec., Reg. Bd., Dr. Roy B. Harrison, 1507 Hibernia Bank Bldg., New Orleans.

MAINE: Augusta, July 7-8. Sec., Dr. Adam P. Leighton, Jr., 192 State St., Portland.

MARYLAND: Baltimore, June 16-19. Sec., Reg. Bd., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Baltimore.

MARYLAND: Baltimore, June 9-10. Sec., Homeo. Bd., Dr. J. S. Garrison, Ten Hills, Baltimore.

MICHIGAN: Ann Arbor, June 9-11; Detroit, June 15-17. Sec., Dr. Guy L. Connor, 707 Stroh Bldg., Detroit.

MINNESOTA: Minneapolis, June 16-18. Sec., Dr. T. S. McDavitt, Lowry Bldg., St. Paul.

MISSISSIPPI: Jackson, June 23-24. Sec., Dr. F. J. Underwood, Jackson.

MISSOURI: St. Louis, June 23-26. Sec., Dr. James Stewart, Capitol Bldg., Jefferson City.

NEBRASKA: Omaha, June 8-10. Supt., Dr. W. H. Wilson, Lincoln.

NEW JERSEY: Trenton, June 16-17. Sec., Dr. Alexander Macalister, State House, Trenton.

NEW YORK: Albany, Buffalo, New York and Syracuse, June 22-25. Sec., Dr. Harold Rypins, Education Bldg., Albany.

NORTH CAROLINA: Raleigh, June 22-26. Sec., Dr. Kemp P. B. Bonner, Morehead City.

NORTH DAKOTA: Grand Forks, July 7. Sec., Dr. George M. Williamson, 860 Belmont Ave., Grand Forks.

OHIO: Columbus, June 9-12. Sec., Dr. H. M. Platter, Hartman Hotel Bldg., Columbus.

OKLAHOMA: Oklahoma City, June 16-17. Sec., Dr. James M. Byrum, Shawnee.

OREGON: Portland, July 7-9. Sec., Dr. Urling C. Coe, Stevens Bldg., Portland.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 7-11. Sec., Dr. J. George Becht, State Capitol, Harrisburg.

RHODE ISLAND: Providence, July 2-3. Dr. Byron U. Richards, State House, Providence.

SOUTH CAROLINA: Columbia, June 23. Sec., Dr. A. Earle Boozer, 906 Forum Bldg., Sacramento.

SOUTH DAKOTA: Deadwood, July 21. Dir., Dr. H. R. Kenaston, Bonesteel.

TENNESSEE: Knoxville, Memphis and Nashville, June 12-13. Sec., Dr. Alfred B. DeLoach, 434 Madison Ave., Memphis.

TEXAS: Austin, June 23-25. Sec., Dr. T. J. Crowe, 918-19 Mercantile Bank Bldg., Dallas.

UTAH: Salt Lake City, July 7. Dir. of Regis., Mr. J. T. Hammond, 412 State Capitol Bldg., Salt Lake City.

VERMONT: Burlington, June 24-26. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 23-26. Sec., Dr. J. W. Preston, Shenandoah Life Bldg., Roanoke.

WASHINGTON: Olympia, July 6. Sec., Mr. William Melville, Olympia.

WEST VIRGINIA: Martinsburg, July 7. Sec., Dr. W. T. Henshaw, Charleston.

WISCONSIN: Milwaukee, June 30, July 1-2. Sec., Dr. Robert E. Flynn, 315 State Bank Bldg., La Crosse.

WYOMING: Cheyenne, June 8-10. Sec., Dr. J. D. Shingle, Citizens Bank Bldg., Cheyenne.

ADDITIONAL HOSPITALS APPROVED BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS FOR THE TRAINING OF INTERNS

Since the list of Hospitals Approved for Internships was printed in THE JOURNAL, March 28, the following additional hospitals have been approved:

St. Francis Hospital, Santa Barbara, Calif.
Colorado General Hospital, Denver.
Washington Sanitarium and Hospital, Washington, D. C.
Wesley Memorial Hospital, Emory University, Ga.
German Evangelical Deaconess Hospital, Chicago.
Ravenswood Hospital, Chicago.
Research and Educational Hospital of the University of Illinois, Chicago.
Roseland Community Hospital, Chicago.
Decatur and Macon County Hospital, Decatur, Ill.
Wesley Hospital and Nurse Training School, Wichita, Kan.
St. John's Hospital, St. Paul.
Chester County Hospital, West Chester, Pa.
William Beaumont General Hospital, El Paso, Texas.
U. S. Army Station Hospital, Fort Sam Houston, San Antonio, Texas.
Wheeling Hospital, Wheeling, W. Va.
St. Elizabeth Hospital, Appleton, Wis.
Marquette University Hospital, Milwaukee.
University of Alberta Hospital, Edmonton, Alberta, Canada.

California February Examination

Dr. Charles B. Pinkham, secretary, California Board of Medical Examiners, reports the written examination held at Los Angeles, Feb. 9, 1925. The examination covered 9 subjects and included 90 questions. An average of 75 per cent. was required to pass. Of the 73 candidates examined, 53 passed, and 20 failed. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
College of Medical Evangelists	(1924, 3)	76.5, 82.1, 87.1
University of California	(1924)	80.2
University of Colorado	(1924)	85.1
Howard University	(1923)	82.2
Northwestern University	(1923, 2)	76.3, 82.2
Rush Medical College	(1923) 84.8, (1924, 4)	77.6, 81.8, 85.0, 85.2
University of Illinois	(1920) 76.2, (1922) 80.4, (1924, 2)	80.1, 86.3
State University of Iowa	(1924)	86.0
Boston University School of Medicine	(1923)	84.6
Harvard University	(1921)	84.1
Tufts College Medical School	(1924)	86.6
University of Michigan Medical School	(1924, 4)	77.6, 80.5, 83.5, 84.3
University of Minnesota	(1924)†	77.6
Creighton Medical College	(1924)	90.0
Columbia University	(1923) 84.2, (1924, 2)	82.1, 88.2
University and Bellevue Hospital Medical College	(1923)	76.3
Ohio State University	(1923)	85.5
University of Cincinnati	(1924)	81.1
University of Oregon	(1924, 3)	78.2, 84.1, 84.6
Hahnemann Medical College and Hosp. of Philadelphia	(1923)	79.6
Jefferson Medical College	(1920) 88.8, (1923)	85.3
University of Pennsylvania	(1922) 88.2, (1924)	80.6
Vanderbilt University	(1906)	87.4
Manitoba Medical College	(1908)	76.5
University of Manitoba	(1923) 82.6, (1924)	76.3
University of Toronto	(1923)	82.3
University of Vienna, Austria	(1916)*	80.8
University of Berlin, Germany	(1919)*	82.3
University of Marburg, Germany	(1921)*	77.0
National School of Medicine, Mexico	(1914)*	80.7
Imperial University of St. Petersburg, Russia	(1910)*	81.8
University of Tomsk, Russia	(1913)* 78.1, (1914)*	79.7

FAILED College	Year Grad.	Per Cent.
College of Medical Evangelists	(1924)	71.8
College of Physicians and Surgeons of San Francisco	(1906)	63.1
George Washington University	(1924)	72.0
Howard University	(1922)	65.7
Illinois Medical College, Chicago	(1910)	71.4
Tufts College Medical School	(1913)	61.4
St. Louis College of Physicians and Surgeons	(1923)	60.8
Vanderbilt University	(1924)	73.1
University of Toronto	(1903) 27.8, (1911)	68.2
Laval University	(1920)	73.1
University of Paris, France	(1900)*	65.4
University of Berlin, Germany	(1913)	57.8
National University, Greece	(1923)*	41.7
University of Pisa, Italy	(1923)*	65.2
National School of Medicine, Mexico	(1924)*	65.6
University of Kharkov, Russia	(1898)*	17.1
University of Saratov, Russia	(1916)*	68.1
University of Edinburgh, Scotland	(1912)	66.5
University of Geneva, Switzerland	(1910)*	60.8

* Graduation not verified by the American Medical Association.

† This candidate has completed his medical course and received an M.B. degree, and will receive his M.D. degree on completion of a year's internship in a hospital.

Medical Economics and Miscellany

REGISTRATION UNDER HARRISON NARCOTIC LAW

Registration under the Harrison Narcotic Law expires, June 30. It should be renewed on or before that date by physicians who desire to continue to administer, dispense or prescribe narcotics. Failure to register carries with it liability to a two thousand dollar fine or to five years' imprisonment, or both, and in any event will subject the tardy registrant to a 25 per cent. increase in his tax. Physicians who distribute, dispense or administer narcotic drugs of all kinds must register in Class 4, and pay a tax of three dollars. Physicians who dispense any of the so-called exempt preparations must register also in Class 5. A physician registered in Class 4 and registering in Class 5 also is not required to pay any additional tax because of registration in the latter class, but a physician registering in Class 5 only is required to pay a tax of one dollar. The so-called exempt narcotic preparations are defined by the Harrison Narcotic Law to include such as contain not more than 2 grains of opium, or more than one-fourth grain of morphin, or more than one-eighth grain of heroin, or more than 1 grain of codein, or any salt or derivative of any of them in 1 fluid-ounce, or, if a solid or a semisolid preparation, in 1 avoirdupois ounce; and liniments, ointments or other preparations which are prepared for external use only, except liniments, ointments and other preparations which contain cocain or any of its salts, or alpha or beta eucain or any of their salts or any synthetic substitute for them. The exemption applies only to ready-made preparations and remedies compounded in accordance with the United States Pharmacopeia, National Formulary, or other recognized or established formula usually carried in stock by a dealer and sold without prescription. A preparation, to be exempt, must contain active medicinal drugs, other than narcotics, in sufficient quantity to give the mixture valuable medicinal qualities other than those possessed by the narcotic drug alone. Simple dilutions of narcotic drugs made by mixing them with inert or nearly inert substances are not within the exemption.

Physicians should study carefully the scope of the definition of the so-called exempt narcotic preparations stated above, and should determine whether they dispense any of them. If they do, registration in Class 5 is necessary, and with such registration goes the obligation to keep a record of all the so-called exempt narcotic preparations dispensed. Paradoxical as it may seem, the physician who dispenses such relatively inert preparations will find himself compelled to keep a record of such as he distributes even to bona fide patients on whom he is in professional attendance, whereas he may dispense the more potent narcotic drugs without being required by law to keep any record of them. This situation has been brought about, however, by legislation enacted by Congress in 1918, and it can be altered only by Congress. The Commissioner of Internal Revenue is simply discharging his duty when he enforces the law.

At the time of applying for registration or reregistration, the physician must file an inventory of all narcotic preparations he has on hand. If he is registered in Class 4 only, the inventory must include all taxable narcotic drugs and preparations on hand in the physician's regular dispensing stock, if any. If he is registered in Class 5, he must file a separate inventory, but this need not include the so-called exempt narcotic preparations, but only such taxable narcotic drugs as may have been set aside for the purpose of the manufacture of such exempt preparations and remedies. If no preparations except such as are within the exempt class are on hand, the inventory must be filed, nevertheless, and across its face should be written, "Nothing on hand." Proper forms for the preparation of inventories will be furnished by the collector of internal revenue with whom registration is to be effected.

INCIDENCE OF SICKNESS AMONG SCHOOL CHILDREN

The morbidity records of about 5,000 public school children at Hagerstown, Md., for the school year 1923-1924 were tabulated by S. D. Collins (*Pub. Health Rep.* **40**:401 [Feb. 27] 1925) by cause of illness and month of onset, supplementing a previous report on the same subject. The sickness rates for the school year 1923-1924 were somewhat lower than those for 1922-1923, particularly for the respiratory diseases and disorders. The chief difference noted was in the incidence of influenza and of colds. The data show no definite epidemic of influenza in 1923-1924. Data for nearly three school years, December, 1921, to May, 1924, were combined, and the incidence rates were computed for certain diseases and disorders. The frequency of common colds was found to be more than twice as great as that of any other illness. Headache, digestive disorders, sore throat, toothache and influenza were next in frequency in the order named. The respiratory disturbances constituted 46 per cent. of all cases of sickness reported during the three years. The incidence of sickness based on the weekly reports of teachers was compared with similar data obtained by bimonthly canvasses of a group of families. When cases lasting less than three days are eliminated, the rates are approximately the same except in the case of headache. It would seem that while the bimonthly canvasses revealed most of the cases lasting three days or longer, they failed to bring to light all the cases of sickness of but short duration. It would seem that headache was sometimes reported in the schools as a cause of absence when the absence was not due to sickness at all. However, the method of collecting morbidity data through school reporting seems in most cases to be essentially accurate, and the information seems to be more complete than that obtained by bimonthly canvasses. Based on a conservative estimate of the cost of the operation and maintenance of the schools and the percentage of the days enrolled that were lost on account of sickness, it was found that for a school population of about 5,000 children, approximately $9,500 was spent for the operation and maintenance of the schools when children were sick and unable to attend them. About $4,800 of this amount is chargeable to the respiratory diseases, $1,700 to the common communicable diseases of children, and $3,000 to all other causes of illness. Sickness rates among children whose school work was satisfactory were compared with the rates among children whose school work was not satisfactory. The rates for the unsatisfactory group were considerably higher than those for the group doing satisfactory school work.

DEATH RATES AMONG INSURED PEOPLE

The figures given here were taken from the Statistical Bulletin for January, 1925, published by the Metropolitan Life Insurance Company, as reported in *Public Health Reports* (**40**:414 [Feb. 27] 1925), and present the mortality experience of the industrial insurance department of the company for November and December, 1924, and for the years 1914 to 1924, inclusive. The rates for 1924 are based on a strength of more than 15,000,000 insured persons. The death rate for 1924 for this group of persons was 8.5 per thousand, which is 5.2 per cent. lower than the rate for 1923, and lower than the rate for any previous year. There were 130,790 deaths during the year 1924, which was 7,210 less than would have occurred had the 1923 rate obtained, and 61,958 fewer deaths than would have occurred under the 1911 death rate. The typhoid fever death rate, 4.5 per hundred thousand, was the lowest ever recorded in the history of the company. This marks a reduction of 13.5 per cent. from the rate for 1923, of 38.4 per cent., within the last five years, and of 72 per cent. in the last ten years. A continued reduction is shown in the death rate for tuberculosis from 110.5 per hundred thousand in 1923 to 104.7 in 1924. The decline since 1911 (224.6) was 53.4 per cent. For pulmonary tuberculosis alone the rate dropped to 93.7 per hundred thousand, a decline of 6.9 per cent. from that for 1923. For the first time the rate for this form of tuberculosis among this group

was under 100 per hundred thousand; and it is noted that these low rates are for wage earners and their families, living in cities, who uniformly show higher death rates for these diseases than the rates for the general population. The cancer mortality rate is lower than in 1923 or 1922, but is the same as that for 1921 and higher than the rate for any year prior to 1921. The death rate for diabetes declined to 15.1 per hundred thousand from a rate of 16.2 in 1923, and a rate of 17.2 in 1922. Cerebral hemorrhage, organic heart disease and chronic nephritis registered slight declines. Mortality from organic heart disease still stands, as in 1923 and 1922, the leading cause of death. Deaths from puerperal diseases continued the decline begun in 1921. Death from puerperal septicemia dropped to 6.6 per hundred thousand in 1924, the lowest record for this group of women. The death rate for alcoholism shows a slight decline from that for 1923, although it was still higher than the rates for 1922, 1921 and 1920. The death rate for cirrhosis of the liver was the same as in 1923, 5.8 per hundred thousand. Increases were recorded for accidental burns and accidental drowning, and fewer deaths from falls, machinery accidents and railroad accidents. Deaths from automobile accidents continued to increase in 1924, the rate being 16.0, as compared with 15.4 in 1923. Automobile fatalities head the list of accidental deaths, causing four times as many deaths as railroad accidents, and more than twice as many as result from accidental falls or accidental drownings.

INTERNATIONAL HEALTH RELATIONS

Although it is a popular saying that disease knows no political boundaries, Surg. Gen. H. S. Cumming in an address before the school of hygiene and public health of Johns Hopkins University, pointed out the differences among various countries as regards the barriers erected against the importation of disease. The first attempt to restrict pandemics was the imposition of terms of quarantine, which were not based on accurate knowledge of the epidemiology of the diseases feared, and which, in many cases, imposed an intolerable burden on commerce. Indeed, it was with the view to reduce costly delays in shipping, rather than to improve the protection of health, that more specific measures of quarantine and disinfection were adopted. Surgeon General Cumming reviewed the accomplishments of the earliest international conferences. The maritime nations usually were united behind certain measures that were opposed by the nonseafaring nations in which public health was less advanced. Our own interest in conventions adopted by international agreement is colored by the fact that health measures are largely a function of the separate state. The federal government must exercise strict supervision of incoming persons and cargoes lest a situation arise over which it has no jurisdiction. The United States took a more pronounced stand in favor of the deratization of vessels than did countries where wharves and docks are commonly constructed of stone, which, unlike our wooden structures, does not afford a harbor for rats.

RICE WORKERS' DERMATITIS

In California, rice farming now constitutes one of the many well established industries of the state. During the last few years there have appeared increasing numbers of cases of dermatitis known by those in the industry as "rice poisoning." Several cases have come before the state industrial accident commission, which has referred the matter for investigation. Several cases were studied by H. E. Alderson and A. G. Rawlins (*California and Western Medicine*, January, 1925), and it was found that they were produced by lack of proper hygiene at work or at home, and that some of them were cases of seborrheic dermatitis with secondary pyogenic infection. Infected scratch-marks, resulting from bites of mosquitoes, which were quite numerous in the rice fields, accounted for some cases. Of course, the dermatitis should be classed as occupational, whether due to dirt, fertilizers, water, mosquitoes or other irritants to which the men are exposed in their work. Likewise, cases of eczema that develop under these conditions in workers whose skins are more vulnerable as a result of seborrhea, anatomic defects or constitutional conditions are certainly to be considered occupational. In many of the rice workers' camps it was found that sanitary conditions were bad, the bathing facilities being quite deficient; but even when the conditions were good, often the workers failed to keep properly clean. It was noted that, even when the men kept very clean, there were numbers of cases of rice dermatitis. An important factor contributing to the general skin irritation is the constant presence of large numbers of mosquitoes in the rice fields. Another observation was that most of the soil in the rice districts is alkaline. This would tend to produce dryness of the skin, thus rendering it more susceptible to the effects of some irritants. This dermatitis assumes different forms, varying with the individual. It is quite evident, however, that there is a specific rice workers' dermatitis, due to the peculiarly irritating qualities of the rice grain. It has not yet been determined whether protein sensitization is a factor in some cases.

OCULAR DEFECTS FROM SKULL INJURIES

The New York State Department of Labor has published a bulletin by Dr. Joseph S. Somberg on "Ocular Defects Arising from Skull Injuries." Skull injuries, slight and severe, are reviewed, and the effects on the various structures of the eye are described. It seems evident that practically no structure of the eye, including muscles and optic pathways, is exempt from involvement following skull injuries. This bulletin emphasizes, especially from the standpoint of the workmen's compensation law, the importance of complete examination of the eyes immediately following all such injuries. The severity of the concussion is not always the determining factor of the amount of ocular damage. If functional ocular involvement does not subside within a definite period, malingering should be suspected, and some of these patients, the author says, will be found to be well trained. If the condition has existed for some time, the differential diagnosis can be made only by repeated examinations with careful notations of the findings at each examination.

VACUUM CYANID METHOD OF DELOUSING

The use of vacuum to force cyanid gas into packages to destroy insect life was introduced by the United States Department of Agriculture to kill bollworms in cotton bales, and for destroying lice in clothing and baggage. It has, however, distinct limitations. As a result of study by H. E. Trimble (*Pub. Health Rep.* **40**:335 [Feb. 20] 1925), the following procedure was adopted at the New York quarantine station: Hydrocyanic acid gas is used, as heretofore, as a routine delousing agent for the clothing of immigrants, from 143 to 285⅗ ounces of sodium cyanid being used per thousand cubic feet (from 12 ounces to 24 ounces per 84 cubic foot chamber), or from 72 to 143 fluidounces of liquid hydrocyanic acid; the initial vacuum is 26 inches, and the exposure is for at least thirty minutes. In loading the sterilizing chambers, the clothing bags and the baggage are placed on wire racks, thus separating them somewhat, rather than packing them in tightly without the racks. After fumigation, the clothing bags are hung up, outdoors if possible, but at least in a stream of fresh air, until odor of gas disappears, before being returned to the immigrants. The same concentration of gas and initial vacuum as recommended for clothing bags is used for baggage, but the time of exposure is one hour. The covers of trunks and other very large cases are opened for fumigation. As it is usually at least from eight to twenty-four hours after fumigation before the immigrant has the opportunity of unpacking his larger pieces of baggage, it is not necessary to air these. The clothing of immigrants with typhus, or exposed to typhus, are sterilized by the vacuum pressure steam process; shoes, hats and suit cases, which steam would injure, are subjected to the standard vacuum cyanid process.

Book Notices

THE CRIPPLED HAND AND ARM. A Monograph on the Various Types of Deformities of the Hand and Arm as a Result from Abnormal Development, Injuries and Diseases, for the Use of the Practitioner and Surgeon. By Carl Beck, M.D. Cloth. Price, $7. Pp. 243, with 302 illustrations. Philadelphia: J. B. Lippincott Company, 1925.

The general introduction of workmen's compensation laws and the large number of crippled and disabled soldiers resulting from the war have given a great impetus to the development of industrial and reconstructive surgery. In this volume the author has taken up the subject in its relations to the hand and arm. The opening chapters, dealing in a superficial way with the anatomy and physiology of the upper extremity, might well have been omitted without detracting from the value of the work. The numerous illustrations of actual cases depict very clearly what may be accomplished by good conservative and reconstructive surgery, and should impress all who are doing industrial surgery with the necessity of extreme conservatism in this line of work.

MANUEL TECHNIQUE DE MICROBIOLOGIE ET SÉROLOGIE. Par Le Professeur A. Calmette, S.-Directeur de l'Institut Pasteur, L. Nègre et A. Boquet, Chefs de laboratoire à l'Institut Pasteur. Cloth. Price, 35 francs. Pp. 568, with illustrations. Paris: Masson et Cie, 1925.

This is intended as a handy reference work for the biologist who wishes to recall the exact formula of a reagent or the precise steps of a procedure, the principles of which are familiar. The general and special technics for the determination of bacteria are given, together with the composition of reagents, the exact directions for preparing mediums, the use of stains, the inoculation of animals, the examination of blood and cerebrospinal fluid, the performing of serologic tests, and the preparation and titration of vaccines and serums. The index is well prepared, so that the biologist who knows little of French may nevertheless find the reaction, preparation or method for which he is searching. The manual is particularly useful to one searching for the description of materials and methods that are more often referred to in the French and other European literature than in American biologic journals.

OPERATIVE SURGERY. By J. Shelton Horsley, M.D., F.A.C.S., Attending Surgeon, St. Elizabeth's Hospital. Second edition. Cloth. Price, $12.50. Pp. 784, with 666 illustrations. St. Louis: The C. V. Mosby Company, 1924.

In this work no attempt has been made to include all surgical operations, but the field, in general, is well covered. Every operation described is either one that the author has performed or an operation that appears to him to be the one best suited for the condition. Thus the book is to a considerable extent a record of his personal experience. The book has been inspired by a desire to emphasize the fundamental principle of the preservation of physiologic function, the interpretation of biologic processes following surgical operations, and the restoration of the physiology of patholgic tissues or organs. In the discussion of most of the operations described, these physiologic and biologic principles are emphasized. In this edition an important chapter has been added dealing with the principles of operations for malignant growths, including some of the recent views on cancer and their bearing on operative treatment. Among the new operations described are: lymphaticostomy (Costain), for diffuse septic peritonitis and in the late treatment of ileus; Stookey's operation for innervating paralyzed muscles; the pylorectomy of Finney; the pulmonary lobectomy of Evarts A. Graham; valvotomy (Cutler) for mitral stenosis; the operation of Coffey and Brown for angina pectoris; the chordotomy of Frazier; the intestinal resection of Kerr; the operations of Crile for partial lobectomy of the thyroid and for ligation of the superior thyroid arteries; the technic of gastro-enterostomy without clamps; a modification of the Billroth I operation for partial gastrectomy, and two new procedures in plastic surgery. The book is of particular interest because in it are collected the several operations devised by the author. These are described at length. The author is modest and frank. When methods are suggested that he believes are superior to his own, he does not hesitate to adopt them. For example, he believes that the intestinal resection of Kerr, when applied to resection of the cecum and the right colon, avoids infection and is therefore superior to the technic he devised for removing this segment of the large bowel. Consequently, he has abandoned his operation and adopted that of Kerr. However, the author has carried his modesty so far that his name does not appear in the index, whereas the names of other surgeons who have proposed operations do appear. This makes it difficult to locate in the volume those procedures which have been devised by him. While the book as a whole is excellent, certain of the opinions held by the author might be questioned by other surgeons. The chapter on transfusion of blood describes fully the author's method of direct transfusion with his arterial suture staff, and other methods of direct transfusion of blood. Most surgeons have abandoned direct transfusion. In discussing the direct method, the Kimpton and Brown cannula method and the citrate method are chiefly emphasized. The method of Lindeman is inadequately described. Horsley states that this method requires skilful assistance and a series of syringes. The method is, however, most practical if slightly modified by making use of 100 c.c. Luer syringes and washing these out with a 2 per cent. solution of sodium citrate before each filling. It is preferable to the use of the Kimpton Brown tube or the method of Percy, in that it does not necessitate cutting down on the vein of the recipient. The descriptions are clear and are augmented by numerous excellent illustrations, most of which are original. Many of the operations added in this edition have not previously been published in any textbook on operative surgery. The book is of high order and can be generally recommended.

DIE UROGENITALERKRANKUNGEN DER KINDER. Störungen und Erkrankungen der Harnbereitung und der Geschlechtssphäre sowie ihrer Organe. Von Prof. Dr. Carl Noeggerath und Priv.-Doz. Dr. Albert Eckstein. Paper. Price, 20 marks. Pp. 245, with 54 illustrations. Leipsic: F. C. W. Vogel, 1925.

This separate volume from the Pfaundler and Schlossmann System of Pediatrics takes up the so-called "medical" diseases of the urogenital tract in a satisfactory manner. This is particularly true of orthostatic albuminuria, diabetes insipidus and the various types of nephritis. One also finds a masterly presentation of the physiology of the kidney, as well as of the chemistry of the urine. The sections on renal tuberculosis, anomalies of the urogenital tract, nondescent of the testis, renal calculi and others of similar nature are not as complete as could be desired. This is no doubt due to the fact that the authors are pediatricians and not urologists. Hence, a closer cooperation of the two specialties is to be recommended for future editions.

FOOD ANALYSIS. Typical Methods and the Interpretation of Results. By A. G. Woodman, Associate Professor of Food Analysis, Massachusetts Institute of Technology. Second edition. Cloth. Price, $3.50 Pp. 529, with 108 illustrations. New York: McGraw-Hill Book Company, Inc., 1924.

The book is not intended for the use of the practicing chemist, but for the instruction of students in methods of food analysis and in the interpretation of laboratory findings. Detailed exposition and tests are given for the detection of food colorings, preservatives and adulterants, and for the analysis of foods, as milk and cream, various fats, oils and carbohydrates, cocoa and chocolate, cider vinegar, flavoring extracts and alcoholic beverages.

THE CHILD HEALTH LIBRARY. Ten volumes. Leather. Price 30 cents each. New York: Robert K. Haas, Inc., 1924.

The publisher has secured some brief essays, providing fundamental information on the care of the child from the period of its conception until it reaches the age when it is able to eat ordinary food and to take a reasonable amount of care of itself. The advice is given by authorities and is based on the most recent scientific studies. The series is published in the pocket size form that is so popular nowadays. Artistic metal book ends are provided for those who wish to keep the set available at home.

Medicolegal

Administration of Morphin to Addict—Prejudice

(Huffman v. State (Okla.), 230 Pac. R. 271)

The Criminal Court of Appeals of Oklahoma says that defendant Huffman, a physician, was found guilty of administering and furnishing narcotic drugs to a person addicted to morphin, and a judgment, which is affirmed, was rendered on the verdict, fixing the punishment at confinement in the penitentiary for a term of one year and a fine of $500. The prosecution was under Section 8887 of the Compiled Oklahoma Statutes 1921, commonly known as the narcotic drug statute. The evidence showed that in the summer and fall of 1921 the defendant, who was the proprietor of a hospital, employed one Gerkin, a painter and well known drug addict, to paint and decorate the inside of the hospital, agreeing that for such service he would treat him for his morphin habit. The defendant's testimony showed that Gerkin worked for him at intervals covering a period of about four weeks, during which the defendant from time to time gave him morphin in an effort to cure him of his habit in the manner commonly known as the "reduction method." The defendant said that he could not control Gerkin and that many times during this period the latter would leave the hospital and go to other places to procure morphin and then return in a nervous, debauched condition. Gerkin finally left and was gone for some months. On his return in February, 1922, he went to the defendant's office to procure some morphin. After Gerkin had stated that he was not getting along very well, was feeling "tough," and wanted a "shot," the defendant told him that he did not like to give him any because they had made a trade the past fall for treatment and Gerkin had refused to let the defendant help him, "and," the defendant said, "I'm not going to give you morphin unless I know there is some benefit coming from it." Gerkin replied that he was sorry he had disobeyed instructions and promised that if the defendant would help him out this time he would make another effort to straighten up. Finally, the defendant agreed to give him some morphin and delivered to him three morphin tablets of one-fourth grain each, which Gerkin picked up and carried away, laying three $1 bills on the table.

That the defendant admitted that he administered the morphin to Gerkin, and that Gerkin was a morphin addict, and described the manner and circumstances of its delivery and the reasons therefor, made the question of the burden of proof of whether its administration was necessary according to recognized medical practice of little importance. The defendant's own testimony indicated that it was not so administered. But be this as it might, the physician who administers the drug is better able than any other person to testify on this point. He it is who makes the diagnosis of the case and observes the needs of the patient, and the burden is properly imposed on him to show that it was necessary. He can thus bring himself within the exception named in the statute, that the law is inoperative as against a physician who administers narcotics that are necessary according to established medical practice. The Oklahoma statute provides that it shall not be necessary for the state to negative any of the matters stated in the exceptions; the burden of justifying by reason of the exceptions is on the defendant. On the question of the sufficiency of the evidence, it appears to the court that the evidence of the defendant alone was sufficient to support the verdict. Even conceding that Gerkin was a morally depraved drug addict and wholly unworthy of belief, and that he instituted this prosecution with malice, all that would not excuse the defendant in administering morphin to a known drug addict, not in the course of treatment for relief from the habit nor in accordance with recognized medical practice, as authorized by law.

In a motion for a change of venue on the grounds of the prejudice and passion of the people against the defendant, he set out that some person or persons had distributed morphin to some of the boys and girls attending high school; that an evangelist had denounced those who were responsible for the distribution, including, by inference, the defendant; and that the newspapers had contained articles reflecting on him. But scores of affidavits were produced which tended to show that there was no such general prejudice as would prevent the defendant from having a fair trial; and denial of his motion was not an abuse of discretion.

Indictment for "Prescribing Medicine"—Sale of "Patent Medicines" for Certain Diseases

(Harper v. State (Ala.), 102 So. R. 55)

The Court of Appeals of Alabama, in reversing a judgment of conviction of defendant Harper, says that the indictment charged that he did treat, or offer to treat, diseases of human beings in this state by prescribing medicine, the kind and description of which was to the grand jury unknown, without having first obtained a certificate of qualification from the state board of medical examiners. The indictment was not in the form prescribed by the Code, Section 7161, No. 84. But it did substantially follow the statute prescribing the offense sought to be charged. It employed the language of the statute so far as such language was necessary. The statute provides that the offense shall consist of treating or offering to treat diseases of human beings in this state "by any system of treatment whatsoever." The indictment charged that the defendant treated or offered to treat diseases of human beings in this state "by prescribing medicine." Prescribing medicine is a system of treatment and comes within the inhibition of the statute. The indictment specified the means of treatment alleged to have been employed by the defendant in treating or offering to treat diseases of human beings. It is not a valid objection to the sufficiency of an indictment that it describes the offense alleged to have been committed with a greater degree of particularity than the statute creating the offense. The indictment was sufficient, and the demurrer thereto was properly overruled.

The defendant was a licensed vendor of "patent medicines." Certain persons who testified as witnesses for the state went to him and told him that they suffered from certain diseases of the body, and he sold them of his wares certain "patent medicines," on which there were labels recommending such medicines for the ailment indicated and designating the dose to be taken. The defendant did not hold himself out as a physican, made no charge for services as such, and received no compensation other than such profit as he derived from the sale of the "patent medicines." It was also in evidence that in selling the medicine the defendant recommended it as being a remedy for the diseases specified. In the opinion of this court, this did not constitute a violation of the statute. The rulings of the trial court were not in accord with this view, and for this error the judgment is reversed, and the cause remanded. (A rehearing denied.)

In a dissenting opinion, Justice Foster says that to prescribe does not necessarily imply a written prescription. It may be an oral one. What is necessary is for the party prescribing to indicate or recommend the medicine to be used. When he places himself in the position of a medical adviser, when he designates, indicates or names the medicine to be used or administered for a certain disease, he is prescribing such medicine for that disease. In medicine, to "prescribe" remedies is to "write or give medical directions; to indicate remedies." It is not necessary that such prescription be written. It may be given or indicated verbally. The defendant did not merely sell the medicine asked for. He indicated to the patient the appropriate medicine for his particular disease. The conclusion is inescapable that he "prescribed" the medicine.

Would the fact that the medicine prescribed was "patent medicine" and the defendant was licensed to sell "patent medicine" absolve him from criminal responsibility? Justice Foster says he thinks not. The defendant's license was to sell the medicine—nothing more. His license to sell such medicine did not authorize him to prescribe the same. If such were the law, it would mean that one obtaining a license to sell "patent medicine" might equip himself with a "cure for every ill," assert his competence to cure diseases of all kinds, pose as one trained in the art of healing, and after conferring with the patient and ascertaining his disease,

determine the proper remedy for such affliction, select the medicine decided on, advise its administration to the diseased person, and thereby evade a law directed primarily for the purpose of preventing quacks from imposing on the public by masquerading as men trained and learned in medical science. The license to sell "patent medicines" does not protect the vendor thereof from criminal responsibility for prescribing such medicine as a remedy for a particular disease. It could not be said as a matter of law that the service which the defendant rendered in prescribing the medicine was a gratuity, for it could have been inferred from the evidence that he received a valuable consideration and adequate compensation therefor in the sale of the medicine prescribed.

Legal Relations of Royalties on Medical Book

(In re Elsner's Will (N. Y.), 206 N. Y. Supp. 765)

The Supreme Court of New York, Appellate Division, Fourth Department, says that several years prior to his death the testator entered into a contract with a publisher to write and prepare for the press a medical work. On his part the author was to receive from the amounts obtained on sales, after payment of the cost of manufacture, a certain percentage on the retail price of books sold at a profit, called a "royalty." Meanwhile, the author made a will creating certain trust estates and providing for the payment of the income to certain beneficiaries, with the remainder or principal to be disposed of otherwise. After his death, a controversy arose among those interested in his estate as to whether royalties that had been paid on the book constituted principal or income. The court thinks that they should be apportioned between principal and income.

The question presented many difficulties. Such funds partake of the nature both of principal and of income. The original principal or capital was the book itself, a creation of the skill, experience and learning of the author. The book might have been sold directly to the publisher either for a definite sum payable immediately or by instalments for a term of years. In either case the principal would then be the sum of money thus received, substituted in place of the original capital, the book. This sum, if invested, would produce income. But the author preferred to take a speculative contract, in effect a sale, whereby he received a percentage of profits to continue as long as the book met with profitable sale. The principal was, under these circumstances, the beneficial interest which the author had in this contract—its present value as a producer of income. It would be a simple question if the principal remained unimpaired in value. Its earning would be income. But it is common knowledge that professional works are books of a period and their profitable life limited in time. Progress in the particular science concerning which they treat opens new and interesting fields of research and discovery. Almost invariably, later books by other authors containing the new learning thus acquired supersede the older books. Their sale declines and vanishes. This was obviously the experience of this book, which produced royalties of nearly $4,000 in 1916, and but $13.50 from July 1, 1922, to Dec. 31, 1923.

The author in his lifetime had a capital of learning and skill in his profession. He maintained an office, no doubt containing medical works, instruments and ordinary equipment. He had doubtless a large clientele. From this principal in his practice he earned an income. He might have sold his practice and office equipment to another and retired. The sum realized would have been his substituted principal; the earnings thereon, if invested, would have been his income. If he remained in practice, this original capital must with advancing years have diminished and become less productive of income, and at last valueless. Thus, also, with the book, the product of his skill; capital and income must eventually disappear; they could not endure like more tangible property. In a case such as this, the principal and income blend and merge in the payments. It is like selling real estate, having a rental value, for a fixed sum payable annually for a definite term of years with possession to the purchaser during the period, and with his title becoming absolute on making payment in full. Yet the present value of the property can be fixed and the fair income therefrom for the term be determined.

Typhoid Fever a "Personal Injury by Accident"

(Brodin's Case (Me.), 126 Atl. R. 829)

The Supreme Judicial Court of Maine says that this claimant for compensation under the workmen's compensation act, while employed by the state highway commission, was paid daily wages and in addition was furnished board and lodging by the commission at a camp located near the road that was being constructed. The water that was supplied by the commission for use at the camp was taken from a spring and brooks near the camp. The claimant drank the water and became ill with typhoid fever. The chairman of the industrial accident commission found as a matter of law that the typhoid so contracted was a personal injury by accident arising out of and in the course of the claimant's occupation and was therefore compensable. The highway commission contended that this finding was erroneous. It said that the sole question was whether the claimant sustained a "personal injury by accident" within the terms of the workmen's compensation act of Maine. It demanded a negative answer to this question on the ground that there was in fact no outside, visible, causative accident, or, in other words, that the typhoid fever from which the employee suffered had no traumatic origin. It categorically insisted that under the Maine statute, in the absence of an outside, visible, causative accident, or one of traumatic origin, the disease of typhoid fever was not compensable. This court therefore faced the inquiry whether, under the facts in this case, the employee, as a matter of law, was entitled to compensation because of a personal injury by accident; or, stating the question in another way, might the disease in this case, not occupational, be said to have arisen from an accident? The interpretation and application of the words "accidental" or "by accident" must govern in the settlement of this question. The courts are not in harmony as to this interpretation. For a definition of the word "accident" the court contents itself with that already adopted by it, quoting that, "As defined by lexicographers, an accident is a befalling; an event that takes place without one's forethought or expectation; an undesigned, sudden and unexpected event. Its synonyms include mishap, mischance, disaster, calamity, catastrophe." The court's conclusion is that, from weight of authority and by reason of the humane and liberal construction to which the compensation act is entitled, the decree awarding the claimant compensation for a personal injury by accident must be affirmed.

Workmen's Compensation—Refusal to Undergo Second Operation

(Massotti v. Newburgh Shipyards, Inc., et al. (N. Y.), 206 N. Y. Supp. 383)

The Supreme Court of New York, Appellate Division, Third Department, says that in November, 1918, claimant Massotti, in the course of his employment, sustained a double hernia. An operation was performed, and it was thought that he was cured, but a hernia reappeared. Oct. 1, 1919, the deputy commissioner instructed him to submit to another operation by a certain physician. The claimant refused to do so. The physician was asked whether he thought a good result probable. He answered: "I wouldn't use the word 'probable.' I would say 'possible,' because the tissues have been already used in repair. They have now broken down again, and he has a return. No one would use the word 'probable,' because you are dealing with once used tissues." He said also that the man's condition might be worse if the operation was unsuccessful. "When you twice use the tissues, you have mighty little to hold up. . . . I think he might have a very much larger hernia." The physician was asked also if he thought "there was a fair chance if this man had an operation," and he answered: "No; I wouldn't want to say that." That testimony was given, Oct. 30, 1919, the same month that, according to the defendants, the claimant disobeyed the commissioner's instructions to submit to a second operation. In view of that testimony, it cannot be said that his refusal was unreasonable.

Society Proceedings

COMING MEETINGS

Maine Medical Association, Bar Harbor, June 23-25. Dr. B. L. Bryant, 265 Hammond Street, Bangor, Secretary.
Massachusetts Medical Society, Boston, June 9-10. Dr. W. L. Burrage, 182 Walnut Street, Brookline, Secretary.
Montana, Medical Association of, Lewistown, July 8-9. Dr. E. G. Balsam, 222 Hart-Albin Building, Billings, Secretary.
New Jersey, Medical Society of, Atlantic City, June 18-20. Dr. J. B. Morrison, 97 Halsey Street, Newark, Secretary.
North Pacific Pediatric Association, Portland, June 29. Dr. E. J. Barnet, Paulsen Building, Spokane, Wash., Secretary.
Pacific Northwest Medical Association, Portland, Ore., June 29-July 1. Dr. Frederick Epplen, Paulsen Building, Spokane, Wash., Secretary.
West Virginia State Medical Association, Bluefield, June 9-11. Mr. Sterritt O. Neale, 211 Smallridge Bldg., Charleston, Executive Sec'y.

ASSOCIATION OF AMERICAN PHYSICIANS

Fortieth Annual Meeting, held in Washington, D. C., May 5-7, 1925

(Continued from page 1692)

SYMPOSIUM ON "DISTURBANCES OF LIVER FUNCTION"

The Liver in Relation to Carbohydrate Metabolism

DR. FRANK C. MANN, Rochester, Minn.: The liver has the greatest varieties of functions. Among these, the one not least in importance is that having to do with its relation to carbohydrate metabolism, its function of regulating the blood sugar. All increases in blood sugar, not associated with the administration of carbohydrate, are dependent directly on the liver. All glycosurias involve directly or indirectly the liver. After experimental removal of the organ, the animal recovers from the immediate effect of its loss and appears to be normal for a certain time, and then develops the characteristic signs of the hypoglycemic syndrome seen in association with a large dose of insulin; and if glucose is not administered, the animal will die. The symptoms associated with the decrease of blood sugar are almost identical with those which follow a large injection of insulin. This proves that the liver has to do with maintaining the level of blood sugar. By the injection of glucose these symptoms could be abolished after they had occurred; or, if glucose were given before they developed, they would not occur. No other substance, except those which can be converted into glucose in the blood stream, has this specific reaction. Levulose has a peculiar reaction in this regard; but it does not return the hypoglycemic animal to normal. Levulose to a certain extent is utilized, which has some important bearing in regard to its use as a liver function test. When the liver and pancreas are removed at the same time, the effect on the blood sugar level is the same as if the liver alone had been removed. If the pancreas is removed from twenty-four to ninety-six hours before the liver, and the liver operation is done after a marked increase in blood sugar has occurred, there is a more marked decrease in blood sugar than in the normal animal. The liver is responsible for the increase in blood sugar following the loss of the pancreas. In the foregoing types of hyperglycemias, the liver is responsible for their production. The sugar which the kidney eliminates following the use of phlorhizin is dependent on the liver; so in the phlorhizin glycosuria we have the same thing as in the other types of glycosuria. We must differentiate carbohydrate metabolism in regard to that which occurs in the muscle, and that which occurs in the liver and maintains the general blood sugar level. In trying out the various substances to replace glucose in the hypoglycemic condition, we found none which would not be converted into glucose which would do it. There were some which should be of some value: the amino-acids and lactic acid. Levulose does under certain conditions. On the other hand, both levulose and lactic acid will cause an increase in the muscle glycogen following removal of the liver, showing that the muscle is able to make glycogen from a few other substances than glucose, again showing slight differences between the liver and the muscle in regard to this function. As the liver has the sole responsibility for regulating the blood sugar, it would also seem that it should have the ability, when necessary, to make glucose from other substances, and it does. After the liver is removed, there is no evidence that urea is formed. Amino-acids are not affected, so that not only does its mechanism of storing glucose for a period of need reside in the liver, but it is the point of manufacture for all substances that will form glucose, and in that way completes its responsibility for being concerned in its vital function of maintaining an adequate blood sugar level. In regard to the results of partial hepatectomy: The results were clear-cut and very definite, but they cannot be duplicated in the case of the patient. In regard to the clinical application of this work, one thing is in relation to the question of diet, which might be of value in patients suffering from liver disease. Unless a simple carbohydrate and a very small amount of protein is given, the animals will not live. This I think is of some significance.

The Biliary Aspects of Liver Disease

DR. PEYTON ROUS, New York: I have gradually come to talk about jaundice instead of about biliary disturbances, and the other things that are excreted in the bile, because our knowledge of the phenomena involving bile salts, cholesterol and the lesser constituents of the bile is so slight. It is the fashion to inquire, when one sees a jaundiced patient, Is this obstructive or hemolytic? Yet we know no other source for bile pigment than the hemoglobin of the blood. It is astonishing how close the relationship of the two is, even during jaundice. If the individual has a large quantity of blood, he puts out a large quantity of bile pigment. The relationship holds true in jaundice as well. Tissue jaundice is a highly imperfect expression of a condition primarily confined to the blood. In the case of the so-called icteric skin-writing, in which there is an intercurrent urticaria during icterus, the wheals are far more yellow than the rest of the patient's tissue, owing, in some cases at least, to a local escape of bilirubin from the blood stream. The same thing is to be seen around wounds during jaundice. Jaundice is fathered by the blood, but it is, of course, born of liver insufficiency. We now know that the greater part of the pigment is of extrahepatic origin, and comes to be changed secondarily in some way by the liver. Is there a functional jaundice? Is all jaundice obstructive? A German school would trace all jaundice to obstruction. The French give clear reasons why we must suppose that it is frequently the result of a functional deficiency on the part of the liver. How else explain the two sorts of bile pigment, and those cases the surgeon sees, in which, after bile drainage has been instituted, the bile becomes lighter and lighter, and the patient dies with a badly damaged hepatic tissue? The existence of a functional jaundice, whereby the liver rejects the bile pigment coming to it and formed in an extrahepatic way, will explain some of the confusing results with the van den Bergh reaction. Nearly all the bile constituents are resorbed in greater or less part from the intestine. What does this resorption mean? Very probably it is incidental to the general resorptive function of the intestine. However, without doubt there is a bodily dependence on it. For example, the rate of bile flow is greatly influenced by resorbed bile salts. The disturbances in other functions incidental to biliary disturbance are not yet well understood. We know that during obstruction the liver gradually ceases to form bile salts. It cannot take up hemoglobin with the normal avidity, or lay down glycogen, or conjugate hippuric acid. The blood sugar is increased. All this we know, but there is far more to be determined

The Liver in Its Relation to Pigment Metabolism

DR. GEORGE H. WHIPPLE, Rochester, N. Y.: The liver is as important in building up and in keeping the balance of the pigment manufacture in the body as it is in maintaining the sugar balance. The liver has to do with the maintenance of the balance of pigment construction, destruction and storage in the body. The liver is the place where a considerable amount of reserve substance which goes to form hemoglobin is stored for use in an emergency, such as may be demon-

strated in long periods of anemia. It used to be considered as a fact that hemoglobin introduced into the body was eliminated quantitatively in the bile; that is not a fact. In anemia it is now known that hemoglobin introduced intravenously or subcutaneously causes only a very slight increase in the appearance of bile pigments. As much as from 50 to 75 per cent. of injected hemoglobin can be recovered under standard conditions with anemia animals on a standard diet. The standard animal during fasting breaks down a good deal of body protein. That is reflected in a considerable increase in the amount of hemoglobin produced over and above the maintenance factor. The only source for such hemoglobin must be the body protein. In our experience, without any exception, the feeding of cooked liver, beef or pig, gives the maximal regeneration of pigment substance. Our data indicate that the storehouse for this potential hemoglobin is largely the liver, and the spleen and bone marrow may participate. The striped muscles also play some part. There are some pigments that apparently cannot be used over again, if given, the bile pigments, for instance. There are other pigments that can be used over again if given. Hemoglobin under certain favorable conditions can be conserved and built up over again to the extent of 75 per cent. or more of the actual amount injected. The time reaction is just the same whether one feeds hemoglobin, injects it, or feeds favorable material.

The Rôle of Liver Function Tests in Practice

DR. L. G. ROWNTREE, Rochester, Minn.: There is much still to be learned concerning the diagnosis of disease of the liver. Liver function tests are of great help, but there are others which should never be lost sight of. The coagulation time is of extreme importance, particularly in relation to surgery. The fragility test gives valuable information from the standpoint of differential diagnosis. Roentgen-ray studies, with the recent introduction of dyes in this connection, add another important laboratory link to the chain of examinations that can be made in diagnosing disease of the liver. The approach to the study of liver function is difficult. The proposed tests must be studied in a large series of cases, and the peculiar value and significance of each test be determined. My studies include more than a thousand determinations of the phenoltetrachlorphthalein retention, and an investigation of other tests of liver function, such as the Van Den Bergh test and the levulose and fructose tests. The two tests which I have decided are of real value are the dye retention, and the level of the serum bilirubin. I do not believe that any of the tests have been of clinical value, except the tests of excretory function. The test of metabolism has not proved of value in clinical practice. When jaundice is present, these tests are of importance in diagnosis from a quantitative point of view, but they lack in information, because the yellow of the patient is just as good as the red of the test. They are of value in latent jaundice. Their greatest value will lie in cases without jaundice, and in such cases the phenoltetrachlorphthalein test is the most useful. They serve to control the results of treatment and to follow the course of the disease. These tests with the blood chemical tests indicate the occurrence of toxemias. The coagulation time has been of extreme importance, particularly when the clotting time is preoperatively controlled by the use of calcium. I believe from our studies that these tests are already of practical value in the clinic and in medicine, but the field of their value is strictly limited.

DISCUSSION

DR. PEYTON ROUS, New York: I am thankful to Dr. Whipple for the opportunity to clarify a statement which may have seemed to imply that the breaking down of hemoglobin is quantitatively expressed in terms of bilirubin. No one at present believes that this is the case. The fact remains that there is evident a very striking relationship between the two, and that as the hemoglobin in the circulating blood falls and rises, so does the bilirubin output in the bile, and, under circumstances of obstruction without pathologic blood destruction, the bilirubinemia. Dr. Whipple has said that there is a conflict of opinion between us. The conflict is not one of opinions, but one of facts. We both come here with many facts. But how were they obtained? For my part, they were obtained by collecting all the bile, under sterile conditions, from day to day, over a period of many weeks. I should like to know how Dr. Whipple's bile specimens were obtained.

DR. JAMES S. MCLESTER, Birmingham, Ala.: We had hoped to get some idea of the functional capacity of the liver that would be of clinical value from a test which, if it worked out, promised to be ideal. I refer to the blood fibrinogen determination—a test that makes this body readily accessible to measurement. It has been shown that the liver is the chief, if not the sole, source of fibrinogen, and Whipple has shown that influences which destroy a large part of the liver substance lead to a low blood fibrin. We found here, too, additional evidence of the enormous factor of safety possessed by this organ, for in our tests of conditions which only partly destroyed the liver, such as a moderate degree of cirrhosis or carcinoma which involved only a part of the liver, there was an increased blood fibrin, and it was not until the liver was almost totally destroyed that the blood fibrin began to fall. Our two lowest findings were in cases with a carcinoma and with tuberculosis, which it was found at necropsy had practically destroyed the liver. Therefore, it seems that fibrinogen as a reflection of change in the liver cannot be used for clinical purposes, because the factor of safety is so great.

DR. GEORGE H. WHIPPLE, Rochester, N. Y.: I do not agree with Dr. Rous' interpretation of his results, nor does he agree with me in the interpretation of my results.

DR. LEONARD ROWNTREE, Rochester, Minn.: I believe these tests are of extreme interest in a large percentage of cases, but with the two I mentioned, I think we can get a clear index of the liver, particularly its power of secretion and excretion.

Lipemia and the Reticulo-Endothelial Apparatus

DRS. B. S. OPPENHEIMER and A. M. FISHBERG, New York: In experimental lipoid feeding, the lipoids are stored in the reticulo-endothelial cells. This lipoid storage manifests itself by the occurrence in various organs of lesions which are made up of large clear cells ("foam cells") filled with lipoid. Lesions identical in structure and distribution with those of experimental lipemia are found in diseases in which the lipoid content of the blood is increased, such as diabetes, obstructive jaundice, and nephrosis. These lesions are made up of large foam cells containing lipoid. The foam cells are derived from the reticulo-endothelial cells, and collections of them may occur in various parts of the body (so-called visceral xanthomas). In the past, the various lesions thus produced have not been sufficiently correlated with one another. In the skin they appear as multiple xanthomas. In Gaucher's disease, the disturbance of lipoid metabolism is primary and apparently constitutional; it is morphologically manifested by the storage in the histiocytes of cerebrosids and other complex lipoids which do not give the ordinary lipoid staining reactions. In the lipemic cases, the derangement of lipoid metabolism is secondary (to diabetes, icterus, etc.), and the lipoids found in the recticulo-endothelial cells are those which circulate in excess in the blood (neutral fat, cholesterol and its esters, and phosphatids). A primary disturbance of lipoid metabolism has recently been described by L. Pick under the name of "lipoid-cell splenohepatomegaly." By this term he understands a "congenital, familial, constitutionally caused anomaly of lipoid, especially of phosphatid metabolism," which in all four reported cases has led to death within the first two years of life, the striking anatomic finding being the presence of large lipoid cells in various organs.

Adiposity and Other Etiologic Factors in Diabetes Mellitus

DRS. J. M. ANDERS and H. L. JAMESON, Philadelphia: In Philadelphia, from 1880 to 1924, there was a steady increase in mortality, until 17.5 per cent. was reached. During 1923 and 1924, the rise in the death rate from diabetes mellitus was checked, but not lowered, with the introduction of insulin.

Ten years ago, diabetes occupied twenty-second place as a cause of death, and since then it has moved up to twelfth place. The excess of deaths among females has progressively increased in recent years until the sex ratio reached 2:1 in favor of the females. We believe that the phenomenal rise in the diabetic death rate and its existence among women during the last five or six years is not solely due to their greater adiposity. The nerve strain of the World War, which fell more heavily on the female sex, may have been a causative factor. The cases of diabetes have multiplied five times since 1880, but the overweight has not increased in the same ratio by any means.

DISCUSSION

DR. E. P. JOSLIN, Boston: As to the statistical increase in diabetes, it seems to me that it is due to the increased longevity of the people. I think the fact that so many more live now to the age at which they are likely to have diabetes accounts for much of the great increase. As to the great increase recently in women, that does not seem so very surprising. For years it has been known that more women have died of the disease, and more men have had it. The records of different clinicians, going back for years, show that more males were treated. The reason for this is not that more males have the disease, but primarily people were more interested in examining the urines of males; secondly, that women were less active in consulting physicians. More men were insured. I suspect the recent rise may be due to the fact that more women's urines are being examined today. On the question of obesity and diabetes, the views of the English and some other countries may help. I have been struck by the comments of Englishmen in Boston on our cases. They noted that our people were a great deal fatter than were people abroad, and they say that we have a great many more diabetic patients 40 years of age in our clinic than they have. Their explanation is that here we have not only obesity to a greater extent than they have, but it is combined with less exercise. It may be that we have an increase out of proportion to what we ought to have, partly because we have 17 of the 19 million automobiles in the world in America. We do not desire to have a corresponding number of diabetic patients out of proportion to the rest of the world.

DR. SOLOMON SOLIS-COHEN, Philadelphia: As a Jew and a Philadelphian, as well as a physician, I am greatly interested in the comparative statistics presented in Dr. Anders' painstaking study. Time does not permit extended discussion of the race question, so that I must be a bit dogmatic. Among civilized men at the present time a pure race does not exist—either Jewish or any other. More than twenty centuries ago, in favoring the legalization of marriages between Jews and Gentile converts to Judaism, a certain Talmudic sage observed: "Sennacherib came and mixed up the world." Hence the Biblical ban against Ammonites and Moabites could no longer be enforced. Since then, Greeks and Romans, Celts and Gauls, Visigoths and Saracens, Teutons, Normans, Saxons, Slavs and other peoples have modified more and more the original Hebrew stock. Certain characteristics may be dominant, others recessive, in this or that mixture. There are geographic and national differences. But on the whole, the factor that constitutes and maintains the Jewish group in this or any country is not race, but faith. With change of faith, individuals and families cease to be numbered therein. Now, the influence of faith in the production of disease is indirect. How indirect, I shall show in a moment. Dr. Anders' figures make the year 1880 very prominent. In that year the czar of Russia promulgated the infamous "May laws," virtually depriving his Jewish subjects of human rights. Bloody massacres—"pogroms"—were openly stimulated by agents of the Russian government. Emigration seemed to be the only hope of my persecuted coreligionists; and in consequence the Jewish population of this country has in the generation intervening increased greatly. It is among the Jewish immigrants from Russia and their children that this disproportionate prevalence of diabetes is chiefly to be observed, and the explanation is to be found, I think, in two facts. In the first place, they brought with them dietetic habits, which, however well suited to their former environment, are not well suited to American conditions. This also accounts in great measure for the coincident obesity. In the second place, they have, even more than other Jews, been exposed for centuries to cruel persecution because of their religion. The consequent emotional disturbances must have affected profoundly their autonomic nerve system; and autonomic-endocrine imbalance is as potent a factor in the pathogenesis of diabetes as it is in that of exophthalmic goiter—another disorder common among Russian Jews, both men and women. In regard to the greater prevalence of diabetes among women than among men, if it is true—and that of course, as Dr. Joslin has pointed out, is a big "if"—the question arises whether it may be due to the more sedentary habits of women, or whether quite a different explanation cannot be thought of, and that is, the entrance of women into economic and political life—in other words, the greater stress and strain of life on the women of today as compared with their sheltered and superior ancestresses. These factors mean much more than the mere coincidence of obesity or of a particular religious faith. Obesity, of course, is significant, in that it indicates an unsuitable diet, a lack of proper exercise, and deficient or aberrant endocrine function. Religious faith is indirectly concerned, as I have briefly indicated, through the persecution it has induced. But neither obesity nor religion can per se give rise to diabetes.

The Formation of Hemoglobin from Inorganic Iron

DR. CHARLES S. WILLIAMSON, Chicago: The question of the formation of hemoglobin from inorganic iron is one of great practical importance. At first it was assumed that inorganic iron was of no service, and then that it was of great service, and recently it has been thought that it cannot be utilized. There are two separate subdivisions of this view: one, that inorganic iron is not absorbed, and the other, that it is absorbed, but it is insusceptible of being converted into hemoglobin. In our experiments the animals were divided into two groups, one of which received the basal diet, and the other iron in addition. After many months there were no differences in the hemoglobin. On the other hand, the animals receiving the iron showed when their bodies were incinerated, with the removal of the gastrointestinal tract, somewhat more iron than those which had not received iron. We next studied the animals under the influence of hemorrhage. In the two groups of animals there was again found no difference as to the time for recovery from hemorrhage, either as to the amount of hemoglobin or as to the completeness of the recovery. Thinking that a single bleeding might not produce sufficient strain, they were bled three times, each time 25 per cent. of the blood volume. Again no differences could be detected, and no beneficial effect could be demonstrated from the ingestion of the iron. The hemorrhage experiments were repeated, but with the subcutaneous injection of iron instead of its ingestion by mouth. Again there were no differences in the groups. However, the livers and spleens of the animals receiving iron subcutaneously showed invariably a great deal more iron, up to from 25 to 30 per cent., than the controls, as might be expected. In another series, pregnant rats were fed iron from the day of conception, and they were kept on the standard diet plus iron during the period of lactation. The young of this group showed no differences from the controls. It is noteworthy that when iron is given intravenously, in somewhat large doses, it has a distinctly toxic effect. On the other hand, it is quite conclusively shown that food iron is capable of bringing back the hemoglobin with great rapidity, whereas iron administered under the conditions given is not.

DISCUSSION

DR. J. M. ANDERS, Philadelphia: My experience has been that iron given by mouth has frequently failed to produce the desired effect, and I have obtained excellent results by the subcutaneous use of it. We have not resorted to this method as commonly as it deserves. In many of the cases in my experience, given orally, it failed, but succeeded when given hypodermically.

DR. GEORGE H. WHIPPLE, Rochester, N. Y.: A few years ago, I read a paper on simple anemia in dogs subjected to one, two or three hemorrhages. We followed the curve of regeneration back to normal, and found that the curve was uninfluenced by inorganic iron. Our experiments agreed in every particular with those just reported. However, working recently with sustained, severe anemia, lasting over months, we have been able to show with the greatest ease that the administration of inorganic iron does promote noticeably the regeneration of hemoglobin. In other words, standard anemia animals, which on a standard diet will regenerate from 1 to 3 gm. of hemoglobin a week over the maintenance factor, when two or three Blaud's pills are added will regenerate from 20 to 40 gm. of hemoglobin in the same period of time; that is, as much as ten times the control animals. This, however, does not compare with feeding liver, when they may regenerate 100 gm. of hemoglobin during the same period. It is obvious that with, prolonged anemia, under these conditions of severe depletion, the inorganic iron not only is rapidly absorbed, but facilitates the formation of hemoglobin in the dog, and, I believe, in other species as well.

(To be continued)

Current Medical Literature

AMERICAN

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Titles marked with an asterisk (*) are abstracted below.

American Journal of Medical Sciences, Philadelphia

313-468 (March) 1925

*Reflections on Interpretation of Systolic Cardiac Murmurs. W. S. Thayer, Baltimore.—p. 313.
*Studies in Human Constitution: Facial Form and Disease Correlation. G. Draper, H. L. Dunn and D. Seegal, New York.—p. 322.
*Congenital Fixation of Duodenum. W. L. Niles, New York.—p. 328.
*Hemohistioblasts of Ferrata. M. N. Richter, New York.—p. 336.
*Lung Abscess: Thirty-three Cases. A. E. Greer, Houston, Tex.—p. 345.
Radium in Dermatology. A. S. Clark, New York.—p. 355.
*Gastric Secretion: Its Bactericidal Value to Man. H. J. Bartle and J. Harkins, Philadelphia.—p. 373.
*Pancreatic Cysts. M. Einhorn, New York.—p. 389.
Magnesium Sulphate; Use in Biliary Drainage. H. W. Soper, St. Louis.—p. 398.
*Relation of Chronic Foci of Infection to Kidney Infection. R. L. Haden, Kansas City, Mo.—p. 407.
*Mother's Milk as Source of Infection in Epidemic Pemphigus Neonatorum (Impetigo Contagiosa Bullosa). R. R. Mellon, D. Caldwell and W. W. Winans, Rochester, N. Y.—p. 419.
*Systemic Reactions to Oral Infection. J. W. Draper and R. K. Johnson, New York.—p. 429.

Interpretation of Systolic Cardiac Murmurs.—Emphasis is laid by Thayer on the fact that it is not the frequency of soft systolic murmurs at aortic and pulmonary orifices that is remarkable. What is remarkable is that they are not always present. The presence of such murmurs depends on the relative stenosis represented by the more or less rigid aortic or pulmonary ring and the dilatability or dilatation of the vessel beyond. The frequency of such murmurs at the aortic orifice in later life is, in the majority of instances, dependent on a greater or less dilatation of the arch, not on roughness at the aortic ring. The frequency of functional systolic apical murmurs in the young when in the recumbent posture, and the importance of recognizing cardiorespiratory murmurs and the realization that they are often heard with considerable intensity in the back, are also stressed.

Facial Form and Disease Correlation.—There are differences both actual and relative in the bony skeleton of the face and the eye placement of different races. Draper, Dunn and Seegal show that the good clinician can observe differences between the faces of his patients by analyzing separately the effect of soft parts and expression, the effect of actual size, and the effect of relative differences in the facial indexes and the eye placement.

Congenital Fixation of Duodenum.—Niles is of the opinion that congenital bands in the abdomen are much more frequent and of greater clinical importance than is generally recognized. Thirty-nine cases of the hepatoduodenal type which came to operation, are reviewed. While fully half of this type of cases can be more or less permanently relieved by medical means, the results of operation have been exceedingly satisfactory.

Hemohistioblasts.—Hemohistioblasts have been observed by Richter in four cases of chronic myelogenous leukemia, and one case each of lymphatic leukemia, quartan malaria, infantile anemia of von Jaksch, and *Staphylococcus aureus* septicemia. The hemohistioblasts of Ferrata (clasmatocytes, adventitial cells, resting wandering cells, reticulo-endothelial cells, etc.), Richter asserts, play an important hemocytogenic rôle in myeloid and lymphoid "metaplasia" in various conditions. In pathologic processes these cells and their derivatives may appear in the peripheral blood stream. Hemohistioblasts are potentially capable of differentiation into granular leukocytes, lymphocytes and monocytes. The type of differentiation which they undergo is not dependent on intrinsic cell differences, but is determined by the character of the environmental conditions imposed. A positive oxydase reaction is given by hemohistioblasts only if they contain neutrophilic, eosinophilic or azurophilic granules.

Lung Abscess.—Thirty-three cases of lung abscess are analyzed by Greer. Twelve cases followed operative procedures under general anesthesia. Of these, four were from operations other than on the throat, one each from a ruptured duodenal ulcer, mastoid disease and carcinoma of the bladder, and a fourth followed tooth extraction. Seven cases followed tonsil operations, all done under general anesthesia. It is significant that 75 per cent. of the postoperative cases followed operations on the throat and mouth. In 33 per cent. influenza was responsible; in 15 per cent. pneumonia; in 2 per cent. an infection of the hand; in 2 per cent. an injury to the chest wall, and in 12 per cent. the etiology was unknown. Therefore, in 64 per cent. of the lung abscesses in this series, the etiology was from nonoperative causes.

Bactericidal Value of Gastric Secretion.—A study was made by Bartle and Harkins of the bacteriologic and germicidal values of twenty-six gastric juices and wash waters of various degrees of acidity, from no free hydrochloric acid to a hydrochloric acid value of 100 degrees. It is concluded that there is an actual bactericidal action constantly being exerted by the gastric juice because of its hydrochloric acid content (and, perhaps, because of some other element, chemical constituent or enzyme). Certainly, a solution of inorganic hydrochloric acid is just as potent a germicide as the secreted gastric juice having the same degree of acidity. It can be inferred, also, from this study that while many bacteria are killed in transit through the stomach of a man having a normal amount of hydrochloric acid in the gastric juice, many, perhaps very many, of the more resistant types, when clothed about with food particles and mucus, pass through unaffected by Nature's barrier.

Pancreatic Cysts.—In the two cases described by Einhorn, pancreatitis seems to have been the cause for the development of the cyst. One patient had a collapse with persistent vomiting about twelve days after his operation for a calculus in the common duct, a condition favorable for pancreatic disease. The other patient had a somewhat enlarged liver and used alcoholic beverages at times excessively. An alcoholic gastritis most probably gave rise to a pancreatitis which laid the foundation for the cyst.

Foci of Infection and Kidney Disease.—According to Haden, pyogenic kidney infection is almost always of hematogenous origin. The pathologic picture is variable and cannot be determined from the clinical symptoms. The so-called pyelitis in the absence of obstruction is almost always a pyelonephritis. The colon bacillus is probably seldom the primary invader, except possibly in cases of lower urinary tract obstruction. The infecting agent is usually a streptococcus or staphylococcus which produces lesions by reason either of great virulence or an especial affinity for

kidney tissue acquired in a chronic focus. In a great majority of cases of chronic pyogenic kidney infection, the organism is fed into the blood stream from chronic foci of infection. Six cases are reported in which kidney lesions similar to those from which the patient suffered were produced in animals by the intravenous injection of organisms recovered from infected teeth.

Mother's Milk as Source of Infection.—The evidence submitted by Mellon, Caldwell and Winans is at least presumptive that certain outbreaks of pemphigus neonatorum are traceable to an initial patient infected by his own mothere's milk. When *Staphylococcus aureus* is rampant, it may be present in the milk and even in the blood stream of certain mothers with few or no symptoms, who may be viewed as "carriers."

Systemic Reactions to Oral Infections.—In the sixteen cases discussed by Draper and Johnson, blindness was imminent in three and the progress of the lesion was arrested by oral detoxication. In three patients, cardionephritic lesions predominated; in two, insomnia was the chief complaint; two patients suffered from well defined psychoses; four patients presented typical symptoms of gastro-intestinal invalidism and obtained subjective relief from oral detoxication; and two patients suffered from neuritis, definitely arrested by the same procedure. An interesting observation in one case consisted in the unexpected but definite relaxation which took place in a Dupuytren contracture of fifteen years' standing. The evidence appears to be increasing that dental infection stands in an important and until recently unrecognized causal relationship to many remote systemic pathologic conditions.

American Journal of Public Health, Albany, N.Y.

15: 289-386 (April) 1925

Method for Early Detection of Epidemic Trends. H. N. Bundesen and A. W. Hedrich, Chicago.—p. 289.
Industrial Health Promotion in Small Plants. C. P. McCord, Cincinnati.—p. 299.
Danger of Decolorizing Vaccine Virus. C. R. Tyler and C. Krumwiede, New York City.—p. 303.
School Medical Inspection in New York State. W. A. Howe, Albany.—p. 305.
Values in Control of Communicable Disease. L. I. Harris, New York City.—p. 310.
Newspaper Publicity. E. G. Burrows, Ann Arbor, Mich.—p. 317.
Standardization of Wassermann Test. R. Gilbert and V. Langworthy, Albany.—p. 323.

Annals of Clinical Medicine, Baltimore

3: 623-666 (April) 1925

Insulin. H. B. Lewis, Ann Arbor, Mich.—p. 623.
*Effect of Ingestion of Small Amounts of Sodium Bicarbonate on Excretion of Acetone Bodies. R. S. Hubbard and F. R. Wright, Clifton Springs, N. Y.—p. 634.
Borderland Between Neurology and General Medicine. G. Campbell, St. Louis.—p. 642.
Relation of Dental Infection to Systemic Disease. R. Pemberton, Philadelphia.—p. 648.
*Asthma and Other Forms of Allergy. W. Lintz, Brooklyn, N. Y.—p. 653.

Effect of Ingestion of Sodium Bicarbonate on Acetone Bodies.—Increases were found by Hubbard and Wright in the excretion of the acetone bodies by subjects at or near the borderline of ketosis when small amounts of sodium bicarbonate were added to the diet. There was apparently an increased production of the acetone bodies and also a sweeping out of acetone bodies already produced which could be demonstrated under suitable experimental conditions. Changes in volume of urine were not responsible for these findings, and both fractions studied, one from preformed acetone plus acetoacetic acid and one from beta-hydroxybutyric acid, showed the changes.

Asthma and Other Forms of Allergy.—A study of 300 cases made by Lintz shows that asthma, hay-fever, angioneurotic edema, etc., usually occur in combination in the same individual, and are only manifestations or symptoms of an underlying disease called allergy. Frequency in urination, certain forms of severe headache and arthritis may be allergic manifestations. Disturbances of the endocrine glands, and an unstable autonomic nervous system are conspicuous symptoms in allergy. Puberty seems to affect the male child favorably and the female child unfavorably. Menstruation, in general, has an unfavorable influence on allergy. Menopause, on the whole, affects allergy unfavorably. The female allergic is apt to be more overweight than the male; the male allergic child has a tendency to overweight. The blood pressure in the cases studied was conspicuous by an increase in pulse pressure and its fluctuating character. As the patient improved, the blood pressure approached normal when either too high or too low. Pregnancy as a rule influences bronchial asthma unfavorably. Allergic patients frequently menstruate while lactating. Hematuria may be of allergic origin. Blood may be found in the sputum, feces and gastric contents of asthma and hay-fever patients. Gastro-intestinal allergy is quite frequently mistaken for chronic appendicitis, and a useless appendectomy is performed. Lintz found calcium iodid, three times daily, a saturated solution, in 1 dram doses, to be the best drug for asthma and other forms of allergy, when given during the interval.

Annals of Surgery, Philadelphia

81: 733-892 (April) 1925

*Anuria Following Transfusion. F. W. Bancroft, New York.—p. 733.
Effect of Administration of Iodin on Exophthalmic Goiter. A. S. Jackson, Madison, Wis.—p. 739.
*Thoracoplastic Procedure for Pulmonary Tuberculosis to Lessen Incidence of Postoperative Pneumonia. J. Alexander, Saranac Lake, N. Y.—p. 748.
Suture of Stab Wound of Heart: Two Cases. R. L. Rhodes, Augusta, Ga.—p. 757.
Cholecystectomy: External and Internal Cholecystostomy. J. B. Deaver, Philadelphia.—p. 761.
Syphilis of Stomach. J. A. Hartwell, New York.—p. 767.
*Duodenojejunostomy. H. F. Graham and P. Platou, Brooklyn, N. Y.—p. 791.
Enteromesenteric Cysts. T. A. Shallow, Philadelphia.—p. 795.
Tuberculoma of Cecum; Two Cases. F. C. Herrick, Cleveland.—p. 801.
Ovarian Dermoids; One Hundred Cases. J. D. Koucky, Rochester, Minn.—p. 821.
Suture of Aponeurosis of Internal Oblique Muscle to Ligament of Poupart for Cure of Inguinal Hernia. G. W. and K. Roberts, New York.—p. 833.
Stricture of Ureter. W. S. Pugh, New York.—p. 839.
Xanthosarcoma of Thumb. V. Vermooten, New Haven, Conn.—p. 851.
Kienboch's Disease of Semilunar Bone; Three Cases. R. Goldsmith, Philadelphia.—p. 857.
Microscopic Examination of Fresh Tissue, and Necropsy Service in Relation to Surgery. L. B. Wilson, Rochester, Minn.—p. 863.

Anuria Following Transfusion.—In the case reported by Bancroft the anuria persisted for a period of nine days with a total secretion during this time of only 35 ounces. As a last resort, having used every known therapeutic agent, a double decapsulation of the kidneys was performed. This was followed by immediate relief of symptoms; the urine output gradually increased until 50 ounces (1,480 c.c.) in twenty-four hours was passed on the fifth day after operation.

Thoracoplasty to Lessen Incidence of Postoperative Pneumonia.—The high incidence of tuberculous pneumonia following resection of the lower ribs is due principally to impairment of the function of expectoration. Alexander asserts that substitution of radical phrenicotomy for resection of the lower ribs, as the first operation to be performed, will probably lession the danger of postoperative pneumonia as well as reduce the frequency with which fresh small tuberculous lesions develop in the unoperated lung. In cases in which there is little or no clinical tuberculosis in the lower lung and in which the diaphragm rises well into the chest after phrenicotomy, resection of only the upper seven ribs has important advantages over the one-stage thoracoplasty, which is now in general use. The combination of primary radical phrenicotomy and secondary resection of the upper seven ribs is worthy of extensive trial in such cases. When the lower lobes of the lung contain more than a few tuberculous lesions, or when the diaphragm rises only a little into the chest after phrenicotomy, the lower ribs should be resected as the third stage of the operation.

Duodenojejunostomy.—Graham and Platou report two cases of chronic mesenteric ileus in which duodenojejunostomy was performed, with success attending the operation in one case. In the second case a gastro-enterostomy had to be made later because of severe bilious attacks. The roentgen ray showed gastric retention, pyloric obstruction, a high duodenum and a prolapsed stomach.

Archives of Neurology and Psychiatry, Chicago

13: 423-538 (April) 1925

*Tumors of Pineal Body. G. Horrax and P. Bailey, Boston.—p. 423.
*Rapidly Developing Paraplegia Associated with Carcinoma. W. G. Spiller, Philadelphia.—p. 471.
Explanation of Mechanism of Induced Rotary and Vertical Nystagmus. J. Favill, Chicago.—p. 479.
Cremasteric Reflex in Its Relation to Abdominal Reflex. G. H. Monrad-Krohn and F. Kornfeldt, Norway.—p. 490.
*Physiology of Feebleminded. G. S. Stevenson, Minneapolis.—p. 497.

Tumors of Pineal Body.—A clinical and pathologic report on twelve verified cases of tumors of the pineal body is made by Horrax and Bailey. Of the five prepubertal cases, two showed considerable evidence of "pubertas praecox." The presence of "pubertas praecox" in a patient who also shows manifestations of increased intracranial pressure and of involvement of the corpora quadrigemina is pathognomonic of pineal tumor, but there is no evidence that any secretion can come from the pineal cells to cause this syndrome. The neurologic localizing signs of pineal tumors consist largely in, (1) involvement of the corpora quadrigemina, i. e., oculomotor palsies, partial or complete deafness; (2) spasticity, usually bilateral, and (3) evidences of implication of the cerebellum or cerebellar tracts.

Paraplegia Associated with Carcinoma.—The two cases reported by Spiller are illustrative of thrombosis of the spinal cord. He says that apoplectiform paraplegia is not likely to occur in any other condition, although thrombosis may be associated with myelitis.

Physiology of Feebleminded.—Stevenson concludes that feeblemindedness is no entity; it must be conceived as a disease of the deficiency group. It probably has a varied etiology. Possibly, certain factors are common in the etiology of many types of cases, social influences especially. It is a point of note in this connection that many of these defects are handicaps to economic success in normal persons.

Boston Medical and Surgical Journal

192: 737-784 (April 16) 1925

Abscess of Frontal Lobe Secondary to Suppuration of Frontal Sinus: Case. L. W. Jerauman, Framingham, Mass.—p. 739.
Case with Considerable Destruction of Knee Joint; Postoperative Result. L. A. O. Goddu, Boston.—p. 742.
Four Cases of Foreign Body in Esophagus. C. O. Day, Boston.—p. 745.
Vital Function Studies. II. Certain Blood and Urine Findings; Gaseous Metabolism. A. W. Rowe, J. Chandler, B. E. Proctor and W. C. Greene, Boston.—p. 747.

192: 835-882 (April 30 1925

Key Model Tongs for Skeletal Traction. A. Thorndike, Jr., Boston.—p. 835.
Comminuted Fractured Dislocation of Right Elbow; Open Reduction. L. A. O. Goddu, Boston.—p. 838.
Health Unit and General Practitioner. C. F. Wilinsky, Boston.—p. 843.
Relative Values in School Health Work. F. Moore, Boston.—p. 845.
Single Incision for Bilateral Inguinal Hernia. C. Bearse, Boston.—p. 851.
Paraphenylendiamin Dermatitis. R. Jacoby, Boston.—p. 852.

Colorado Medicine, Denver

22: 125-154 (April) 1925

University Medical School and Community. G. E. Vincent, New York.—p. 127.
Development of Organized Clinical Teaching. Hugh Cabot, Ann Arbor, Mich.—p. 130.
Plastic Surgery of Nose; with Especial Reference to Correction of "Saddle Nose" Deformities. H. L. Baum, Denver.—p. 140.
Placenta Accreta. C. E. Tennant, R. E. Wilson and H. Craig-Sullivan, Denver.—p. 145.

Journal of Biological Chemistry, Baltimore

63: 179-545 (March) 1925

*Inorganic Alterations of Lymph in Canine Anaphylactic Shock. W. F. Petersen and T. P. Hughes, Chicago.—p. 179.
*Blood Lactic Acid After Insulin Administration. C. H. Best and J. H. Ridout, Toronto.—p. 197.
*Relative Value of Ultraviolet Light and Irradiated Air in Preventing Rickets in Chickens. J. S. Hughes, C. Nitcher and R. W. Titus, Manhattan, Kan.—p. 205.
*Dietary Requirements for Reproduction. IV. Solubility of Reproductive Dietary Complex (Vitamin E) in Various Organic Solvents. B. Sure, Fayetteville, Ark.—p. 211.
Distribution of Nitrogen in Protein Fraction of Tubercle Bacilli After Removal of Tuberculinic Acid. T. B. Johnson and R. D. Coghill, New Haven, Conn.—p. 225.
Rôle of Vitamin B in Relation to Size of Growing Rats. T. B. Osborne and L. B. Mendel, New Haven, Conn.—p. 233.
Distribution of Unsaturated Fatty Acids, Cholesterol and Cholesterol Esters in Experimental Anemia. M. Bodansky, Galveston, Texas.—p. 239.
Influence of Insulin and Epinephrin on Lactic Acid Content of Blood and Tissues. C. F. Cori, Buffalo.—p. 253.
Forms of Nitrogen Found in Certain Lake Waters. B. P. Domogalla, C. Judny and W. H. Peterson, Madison, Wis.—p. 269.
Occurrence of Amino-Acids and Other Organic Nitrogen Compounds in Lake Water. W. H. Petersen, E. B. Fred and B. P. Domogalla, Madison, Wis.—p. 387.
*Imparting Antirachitic Properties to Inert Substances by Ultra-Violet Irradiation. A. F. Hess and M. Weinstock, New York.—p. 297.
Antirachitic Value of Irradiated Phytosterol and Cholesterol. I. A. F. Hess, M. Weinstock and F. Dorothy Helman, New York.—p. 305.
Ammonia and Fixed Base Excretion After Administration of Acid by Various Paths. C. H. Fiske and S. S. Sokhey, Boston.—p. 309.
Cystine in Nutrition of Growing Rat. H. C. Sherman and A. T. Merrill, New York.—p. 331.
New Type of Phosphoric Acid Compound Isolated from Blood, Effect of Substitution on Rotation of *l*-Glyceric Acid. I. Greenwald, New York.—p. 339.
Stereochemistry of 2,5-Anhydrotetroxy-Adiphia Acids. P. A. Levene and H. S. Simms, New York.—p. 351.
Hydrolysis of Sucrose by Invertase in Presence of α-Methyl Glucoside. I. J. M. Nelson and B. Freeman, New York.—p. 365.
*Nutritional Studies of Growing Chick. Relation of Sunlight and Green Clover to Leg Weakness in Chicks. R. M. Bethke, D. C. Kennard and M. S. Kik, Wooster, Ohio.—p. 377.
Concentration of Acetone Bodies in Normal Blood and Urine. R. S. Hubbard and C. V. Noback, Clifton Springs, N. Y.—p. 391.
*Extraction of Parathyroid Hormone Which Will Prevent or Control Parathyroid Tetany and Which Regulates Level of Blood Calcium. J. B. Collip, Alberta, Can.—p. 395.
Effect of Parathyroid Hormone on Normal Animals. J. B. Collip, E. P. Clark and J. W. Scott, Alberta, Can.—p. 439.
Tisdall Method for Determination of Blood Serum Calcium with Suggested Modification. E. P. Clark and J. B. Collip, Alberta, Can.—p. 461.
*Clinical Calorimetry. XXXVII. Infection and Ketogenic Balance. H. B. Richardson and S. Z. Levine, New York.—p. 465.
Apparatus for Measuring Oxygen Consumption of Tissues. A. E. Koehler, Boston.—p. 475.
*Influence of Tension of Molecular Oxygen on Certain Oxidations of Hemoglobin. J. M. Neill and A. B. Hastings, New York.—p. 479.
Hemoglobin System. G. S. Adair, Boston.
I. Classification of Reactions.—p. 493.
II. Theory of Reactions Which Do Not Obey Law of Constant Proportions.—p. 499.
III. Equilibrium of Hemoglobin and Carbon Dioxid.—p. 503.
IV. Reproduction of Carbon Dioxid Curve of Blood with Artificial Mixture of Hemoglobin and Sodium Bicarbonate.—p. 515.
V. Relation of Hemoglobin and Bases.—p. 517.
VI. Oxygen Dissociation Curve of Hemoglobin.—p. 529.

Lymph in Anaphylactic Shock.—In the experiments made by Petersen and Hughes, definite chemical evidence is brought to support the assumption that, in anaphylactic shock, cellular changes in the direction of increased cellular permeability take place. Calcium and magnesium leave the cell, as is shown by the increased concentration in the lymph, while sodium and potassium enter into the cell or cell membrane, as shown by the decrease of these elements in the lymph. These reactions are practically instantaneous, since they become apparent usually in the lymph sample collected during the first five minutes after the injection of the antigen. It is assumed that such phenomena can occur only through the activity of the autonomic nervous system, or as a direct effect of the antigen when it comes in contact with the cell surface. Preliminary stimulation of the sympathetic system increases the effect of the shock.

Blood Lactic Acid After Insulin.—Best and Ridout state that the lactic acid of normal or diabetic dog's blood, as determined by Clausen's method, does not significantly increase during insulin hypoglycemia when this condition is uncomplicated by extreme asthenia or marked hyperirritability.

Value of Ultraviolet Light and Irradiated Air as Preventives of Rickets.—Hughes, Nitcher and Titus conclude that the beneficial action of ultraviolet light in preventing rickets in chickens is due to its direct action on the chickens, and not to the changes it produces in the air the chickens breathe.

Nature of Reproductive Dietary Factor.—As benzene (benzol) and acetone, as well as ether, extract the organic

complex, designated as vitamin E, essential for reproduction, it is concluded by Sure that the reproductive dietary factor is a fat-soluble vitamin.

Value of Irradiated Substances as Prophylactics Against Rickets.—It is shown by Hess and Weinstock that wheat that has been activated by means of ultraviolet irradiation retains its antirachitic potency for a period of weeks. Etiolated yellow wheat as well as green wheat can be rendered active in this way. The same is true of the etiolated (yellow) leaves of lettuce. A solution of chlorophyl is not endowed with antirachitic power by irradiation, nor are hemoglobin, red blood cells, cream, the phosphatid of yolk of egg, or glycerol. On the other hand, refined wheat flour undergoes activation. Vegetable oil retains its protective power for a period of at least six months. It can be activated by an exposure to the mercury vapor lamp for a period of two minutes or less. Oxygen plays no rôle in this process as it takes place in an atmosphere of nitrogen. Fractionization showed that the active principle is present only in the nonsaponifiable moiety of the irradiated oil.

Sunlight an Antirachitic Factor.—Bethke, Kennard and Kik believe that the beneficial effects ordinarily ascribed to green plant tissue and extraneous materials ingested when chicks are outdoors on range are not as great as those of direct sunlight, so far as the antirachitic factor is concerned.

Parathyroid Hormone.—An extract has been made by Collip from the parathyroid glands of oxen by the use of which parathyroid tetany in dogs can be prevented or controlled. The active principle in this extract produces its effect by causing the calcium content of the blood serum to be restored within normal limits. A very close parallelism has been observed between the clinical condition of experimental animals and the calcium content of the blood serum. Coincident with the marked improvement observed following the use of the active extract, a rise in blood calcium has been noted. Overdosage effects have been observed, and the blood findings in this condition invariably show a condition of hypercalcemia. The extract containing the active principle has been found to be effective by each of three modes of administration; namely, by the oral route, by intravenous injection and by subcutaneous injection. A rise in the level of blood calcium in the normal dog has been observed following the injection of parathyroid extract.

Effects of Infection in Diabetes.—Evidence is presented by Richardson and Levine that the ill effects of infection in diabetes are due, not to a disturbance in the ketogenic balance, but to an actual reduction in the amount or proportions of glucose oxidized.

Oxidation of Hemoglobin.—The results presented by Neill and Hastings are in keeping with the electrochemical findings of Conant. Evidence is presented that reduced hemoglobin is the substance oxidized to methemoglobin, and that the addition of molecular oxygen or carbon monoxid changes a hemoglobin molecule to a substance oxidized with greater difficulty.

Journal of Bone and Joint Surgery, Boston

7: 241-507 (April) 1925

Coxa Vara in Adolescence: Six Cases. F. C. Kidner, Detroit.—p. 241.
Benign Cystic and Fibrocystic Diseases of Bones: Five Cases. F. A. Jostes, St. Louis.—p. 251.
Sacralization of Fifth Lumbar Vertebra. B. H. Moore, Chicago.—p. 271.
*Osteitis Deformans (Paget's Disease). P. Lewin, Chicago.—p. 279.
Caries of Neural Arch of Vertebra. J. B. Barnett, Stanmore, Middlesex, England.—p. 286.
No-Foreign Body, Tight Fitting Window Cast Technic in Open Reduction of Fractures. A. L. Soresi, New York.—p. 289.
New Methods for Study of Diseases of Circulation of Extremities. B. Brooks, St. Louis.—p. 316.
*Osteochondritis Dissecans. M. A. Bernstein, Chicago.—p. 319.
Congenital Dislocation of Hip in Young Adults. N. Allison, Boston.—p. 330.
*Pseudarthrosis of Tibia in Children. M. S. Henderson, Rochester, Minn.—p. 340.
Analysis of Congenital Hips Observed in Private Practice. C. C. Chatterton and A. E. Flagstad, St. Paul, Minn.—p. 355.
Operative Reduction for Congenital Luxation of Patella. H. R. Conn, Akron, Ohio.—p. 370.
*Dislocation, Excision and Replacement of Astragalus. W. L. Sneed, New York.—p. 380.
Method of Passing Bone Sutures at Depth; Extensor Contracture of Fifth Metatarsal Bone. A. H. Freiberg, Cincinnati.—p. 400.
Estimating End Results Following Injury. J. J. Moorhead, New York.—p. 408.
Internal Derangement of Knee-Joint. W. R. Bristow, London.—p. 413.
Complete Paralysis of Anterior Crural Nerve Following Childbirth. N. A. Cary, Oakland, Calif.—p. 451.
Central Fracture of Acetabulum: Case. B. L. Coley, New York.—p. 458.
Osteochondritis Dissecans of Knee. I. Balensweig, New York City.—p. 465.
Multiple Enchondromata of Scapula: Case. H. H. Wescott, Roanoke, Va.—p. 469.

Pathologic Fracture with Paget's Disease.—Lewin records the case of a woman, aged 74, who sustained a pathologic fracture of the femur at the junction of the upper and middle thirds, the seat of Paget's disease. Buck's extension was immediately applied. Because of incomplete reduction of the fragments, operation was advised. The usual bone grafting or plating operations were contraindicated by the nature of the bone affected. Two Lane plates were applied and held in place by two Parham-Martin bands. The patient was also given cod liver oil, thyroid extract and calcium lactate. The diet included large quantities of milk and fresh vegetables and fruits. Direct sunlight was utilized when available. Perfect union resulted. Lewin believes the medication was very important in producing bony callus.

Osteochondritis Dissecans of Knee.—Bernstein says osteochondritis dissecans is probably hereditary, affecting more than one member of a family, as is shown by his three cases. It first manifests itself as an elliptical or almond-shaped rarefaction of the peripheral border of the mesial condyle, which after a time becomes free at the outer peripheral border, finally loosening up and becoming attached by a fibrous band to the condyle, or actually freeing itself and becoming a loose body within the joint. The three patients reported on were siblings.

Pseudarthrosis of Tibia in Children.—Nineteen cases of pseudarthrosis of the tibia developing in children are reported by Henderson. These cases fall readily into three groups: (1) cases in which the fracture was discovered at birth, or within a few days of birth; (2) cases in which the fractures were sustained in infancy or early childhood, that is, from 3 months to 5 years of age; and (3) cases in which the fractures were sustained in middle or late childhood, 6 to 14 years. Definitely congenital cases in which there is absence of bone are not included.

Treatment of Dislocated Astragalus.—Sneed believes that in all severe dislocations of the astragalus the blood supply of the bone is interrupted, perhaps temporarily destroyed. There is no main nutrient artery to this bone. It is supplied by numerous small blood vessels. Sneed says that in severe dislocations of the astragalus this bone may be replaced in normal position, and a good functioning foot results.

Journal of Nervous and Mental Disease, New York

61: 337-448 (April) 1925

Muscle Tones. I. Abrahamson, New York.—p. 337.
*Malarial Inoculation Treatment for General Paresis. N. D. C. Lewis, Washington.—p. 344.
Memory Deterioration in Lethargic Encephalitis. G. L. Bebb, New York.—p. 356.

Malarial Inoculation Treatment for General Paresis.—Personal experience and a review of the literature lead Lewis to say that the reported results of the malarial inoculation treatment of general paresis have been unusually concordant concerning the percentages of improvement or remission, which results justify a conscientious investigation of the phenomena produced.

Journal of Radiology, Omaha

6: 89-131 (March) 1925

Gout: Value of Roentgenologic and Hematologic Examinations. H. B. Philips, M. M. Pomeranz and J. Pincus, New York.—p. 89.
Limitations of Physiotherapy in Treatment of Pulmonary Tuberculosis. R. G. Breuer, Norton, Kan.—p. 97.
Diathermy in Middle Ear Pathology. E. G. Linn, Des Moines, Iowa.—p. 102.
Diathermy. L. C. Donnelly, Detroit.—p. 108.
Advanced Hypernephroma Treated by Diathermy. W. B. Wallace and G. van A. Brown, Detroit.—p. 110.

Kansas Medical Society Journal, Topeka

25: 97-130 (April) 1925

Extrarenal Albuminuria. F. A. Carmichael, Osawatomie.—p. 97.
"Vacuum Headaches." H. E. Yazel, Kansas City, Mo.—p. 99.
Importance and Care of Perineal Orifices. E. M. Miers, Kansas City, Mo.—p. 102.

Kentucky Medical Journal, Bowling Green

23: 197-254 (April) 1925

Fermentation Test for Quantitative Determination of Sugar in Urine. M. Y. Marshall, Henderson.—p. 199.
Case of Cow Pea in Right Bronchus of Child Eleven Months Old. C. E. Purcell, Paducah.—p. 201.
Dissection of Clark County Medical Society Members Mostly Their Faults. S. J. Rose, Winchester.—p. 202.
Sunny Southland. J. H. Hendren, Pineville.—p. 203.
Modern Day Treatment of Tuberculosis. W. Z. Jackson, Arlington.—p. 208.
*Rare Complication Following Tonsillectomy; Paralysis of Laryngeal Nerve Following Thyroidectomy. R. H. Cowley, Borea.—p. 209.
Blood Transfusion Methods and Results. R. L. Woodard, Hopkinsville.—p. 214.
Indications for Transfusion. C. C. Howard, Glasgow.—p. 215.
Intravenous Use of Mercurochrome in Blood Stream Infection. V. E. Simpson, Louisville.—p. 215.
Chronic Osteomyelitis and Tuberculous Fistulae. B. A. Washburn, Paducah.—p. 223.
Mastoidectomy Under Local Anesthesia: Two Cases. S. Watkins, Louisville.—p. 227.
Case of Arteriosclerotic Pseudo-Uremia. F. C. Askenstedt, Louisville.—p. 231.
Of What Does Modern Care and Treatment for Insane Consist? W. A. Jillson, Lakeland.—p. 234.
What Our Social Service Department is Doing. M. J. Schaley, Louisville.—p. 237.
Occupational Therapy. F. G. Ellis, Lakeland.—p. 239.
Dementia Praecox and Its Antisocial Symptoms Requiring Institutional Care. L. B. Trigg, Lakeland.—p. 240.
Why Mental Clinics Should be Established. G. H. Day, Louisville.—p. 243.
Unilateral Continuous Epilepsy: Case. J. J. Moren, Louisville.—p. 244.
Anterior Poliomyelitis: Case. L. W. Frank, Louisville.—p. 246.
Typical Case of Vincent's Angina. S. G. Dabney, Louisville.—p. 248.

Severe Tissue Bleeding Following Tonsillectomy.—Cowley reports a case of severe tissue bleeding following tonsillectomy which caused so much distension that intubation became necessary. After three days, the bleeding started in the mouth, and, as it ran down into the trachea, it clotted and stopped the tube so that it had to be removed often. The coughing and constant movements kept the bleeding going till the amount of blood lost necessitated transfusion. From this time on, the bleeding stopped, the swelling began to recede and, at the end of the sixth day, the breath began to pass through the mouth. On the morning of the seventh day, mouth and nasal breathing was free and the tracheal tube was removed.

Michigan State Medical Society Journal, Grand Rapids

24: 187-230 (April) 1925

Organotherapy in Hypopituitary Disturbances. R. L. Schaefer, Detroit.—p. 187.
Diabetes in Michigan. W. J. V. Deacon, Lansing.—p. 189.
Intracranial Hemorrhage in New-Born. T. D. Gordon, Grand Rapids.—p. 192.
Negro and White Pelvis. R. W. Alles, Detroit.—p. 194.
Dental Problems of Childhood from Pediatric Standpoint. L. Jones, Flint.—p. 197.
Spinal Anesthesia. C. L. F. de Vries, Lansing.—p. 201.
Roentgen-Ray Findings in Rickets. P. M. Hickey, Ann Arbor.—p. 203.
Pulmonary Syphilis. C. F. Karshner, Grand Rapids.—p. 205.

Military Surgeon, Washington, D.C.

56: 385-528 (April) 1925

Lessons of Nutrition Derived from Great War. P. R. Rockwood.—p. 385.
Malta Fever Along Mexican Border. R. L. Holt and F. H. K. Reynolds.—p. 414.
Procurement and Training of Medical Officers. W. H. Allen.—p. 425.
Hookworm in Porto Rican Soldiers in Panama. J. F. Gallagher.—p. 430.
Physical Examinations for Flying; Disqualifications. C. F. Shook.—p. 448.
Medical Officer in Vienna. A. G. Wilde.—p. 452.
Recording of Head Injuries in War by Surgeon in Forward Area. A. M. Hanson.—p. 461.
Endemic Goiter Problem. R. Olesen.—p. 466.
Evacuation of American Wounded in Aisne-Marne Battles, June and July, 1918. J. R. Kean.—p. 473.

Minnesota Medicine, St. Paul

8: 203-274 (April) 1925

Silent Antrum. W. L. Burnap, Fergus Falls, Minn.—p. 203.
Splenectomy in Purpura Hemorrhagica. H. Z. Giffin, Rochester.—p. 207.
Thyroid Enlargement in Minneapolis Children. C. A. Stewart, Minneapolis.—p. 214.
*Relative Merits of Various Treatments of Peptic Ulcer. D. C. Balfour, Rochester.—p. 218.
Acute Perforated Gastric and Duodenal Ulcers. P. E. Stangl, St. Cloud.—p. 224.
Progress of Cardiology During 1924. F. A. Willius, Rochester.—p. 230.
Tuberculosis and Other Respiratory Infections Among University Students. J. A. Myers and W. P. Shepard, Minneapolis.—p. 237.
Tic Douloureux. C. R. Ball, St. Paul.—p. 242.

Treatment of Peptic Ulcer.—The relative merits of the different surgical procedures employed in 6,665 cases of chronic duodenal ulcer are discussed by Balfour. Gastroenterostomy was performed in 5,755 cases; pyloroplasty, gastroduodenostomy, in 271 cases; excision alone was done in 260 cases; partial gastrectomy in thirty cases.

Missouri State Medical Association Journal, St. Louis

22: 125-164 (April) 1925

Management of Diabetes. D. R. Black, Kansas City.—p. 125.
Diverticulitis of Large Intestine. J. W. Larimore, St. Louis.—p. 129.
Method of Reducing Maternity Death Rate in Missouri. G. C. Mosher, Kansas City.—p. 133.
Radium in Gynecology. G. Gellhorn, St. Louis.—p. 139.
Organization of Southeast Missouri Medical Association and Medical Practice in Early Days. G. W. Vinyard, Jackson.—p. 140.
Reminiscences of Medical Profession of Southeast Missouri. R. T. Henderson, Jackson.—p. 144.

Nebraska State Medical Journal, Norfolk

10: 113-152 (April) 1925

Cesarean Section. E. C. Sage, Omaha.—p. 113.
Use of Hypertonic Salt Solution in Treatment of Neurosyphilis. J. J. Keegan and G. H. Moates, Omaha.—p. 119.
Modern Aspects of Nutrition. V. E. Levine, Omaha.—p. 122.
Subacute Bacterial Endocarditis. J. C. Waddell, Beatrice.—p. 127.
Obstetric Procedures. J. R. Taylor, Sidney.—p. 130.
Head Pains of Local Origin. B. A. Smith, Auburn.—p. 132.
Etiology and Prevention of Diphtheria. J. D. Reid, Pilger.—p. 134.
Two Cases of Obscure Anemia. W. D. Lear and M. E. Lathrop, Omaha.—p. 136.

New Jersey Medical Society Journal, Orange

22: 113-144 (April) 1925

Prevention and Relief of Heart Disease. W. D. Stroud, Philadelphia.—p. 113.
Pneumonia and Acidosis Complicating Diabetes. G. G. Duncan, Morristown.—p. 118.
Rubin Test for Sterility: Six Cases. J. Huberman, Newark.—p. 122.
Pruritus of Perineum. J. F. Montague, New York.—p. 125.

New Orleans Medical and Surgical Journal

77: 409-456 (April) 1925

Insulin in Hands of General Practitioner. I. I. Lemann, New Orleans.—p. 409.
Old Age Problem. W. B. Dickens, Greenwood, Miss.—p. 415.
More Common Dermatoses Due to Occupational and External Irritants. M. T. V. Studdiford, New Orleans.—p. 420.
Dysphonia, as Expressing Disease Remote from Larynx. H. Dupuy, New Orleans.—p. 423.
Fractures of Base of Radius. P. G. Lacroix and I. Cohn, New Orleans.—p. 425.
Hysterectomy. C. J. Miller, New Orleans.—p. 428.
Roentgen-Ray Treatment of Diseased Tonsils and Adenoids. H. G. F. Edwards, Lafayette, La.—p. 431.
Acute Intestinal Obstruction. E. M. Ellis, Crowley, La.—p. 435.
Treatment of Stricture of Urethra. A. Nelken, New Orleans.—p. 439.
Factors in Halitosis from Gastro-Enterological Standpoint. A. L. Levin, New Orleans.—p. 442.

Northwest Medicine, Seattle

24: 159-210 (April) 1925

Parasitic Origin of Carcinoma. M. J. Scott, Butte, Mont.—p. 162.
When Abdomen Should Not Be Opened. P. W. Willis, Seattle, Wash.—p. 167.
Reconstruction of Bile Duct. C. E. Hagyard, Seattle, Wash.—p. 170.
Actinomycosis of Kidney: Case. A. H. Peacock, Seattle, Wash.—p. 173.
Kidney Infections. C. Ferguson and W. J. Pennock, Spokane, Wash.—p. 176.
Case of Kochler's Disease and Discussion. D. A. Murray, Seattle.—p. 180.
*Malignant Pigmented Mole in Infant. H. E. Coe, Seattle.—p. 181.
Purpura Hemorrhagica Following Benzol Poisoning. W. C. Speidel and C. Melgard, Seattle.—p. 182.

Closure of Postoperative Enterostomies. A. O. Loe, Seattle.—p. 183.
Surgery of Tonsil. J. I. Mershon, Marshfield, Ore.—p. 184.
Medical Witness as Teacher of Scientific Medicine. D. A. Nicholson, Seattle.—p. 188.
Ectopic Gestation: Six Cases. D. E. McGillvray, Port Angeles.—p. 191.

Malignant Pigmented Mole in Infant.—Coe relates the case of a child who at birth had two small wartlike growths slightly larger than the head of a black pin in the hair of the left frontal region. They grew rapidly, however, and coalesced so that at the age of 2 months there was a single mass, and the scalp was so tightly stretched over it that blebs appeared from time to time. About a week later, a swelling appeared on the left side of the neck just below the ear which increased in size rapidly and became tender. The mass on the head had at times become dark in places as if from old blood. The babe, however, had been gaining weight and apparently had not been in any discomfort until recently. A diagnosis of carcinoma was made and immediate removal advised. The mass on the head was removed, also an enlarged cervical gland. The microscopic diagnosis was pigmented mole. Four weeks later the tumor recurred. The baby died soon afterward.

Ohio State Medical Journal, Columbus

21: 233-304 (April 1) 1925

Birth Control, Affirmative and Negative Lay Viewpoint, and Attitude of Medical Profession. M. Tate, Cincinnati.—p. 245.
Veneral Disease Problem in Relation to Public Health. H. J. Gordon, Akron.—p. 251.
Radium Treatment in Diseases of Eye and Adnexa. C. J. Broeman, Cincinnati.—p. 257.
Endocervicitis and Its Results. A. B. Quarser, Portsworth.—p. 264.
Fracture of Skull. T. F. Heatley, Toledo.—p. 265.

Oklahoma State Medical Association Journal, Muskogee

18: 72-95 (April) 1925

Surgical Morbidity and Mortality. A. L. Blesh, Oklahoma City.—p. 72.
Mortality and Morbidity in Acute Appendicitis. H. Reed, Oklahoma City.—p. 77.
Intravenous Administration of Mercurochrome. J. A. Reddy, Oklahoma City.—p. 78.
Varicose Veins of Broad Ligament. F. A. Hudson, Enid.—p. 80.

South Carolina Medical Association Journal, Greenville

21: 81-112 (April) 1925

Preventive Pediatrics. R. M. Pollitzer, Greenville.—p. 92.
Good of County Society. J. W. Jervey, Greenville.—p. 95.
Passing of Country Doctor. J. D. Grist, York.—p. 97.
How to Maintain County Medical Society. W. P. Timmerman, Batesburg.—p. 99.

Southwestern Medicine, Phoenix, Ariz.

9: 129-170 (April) 1925

Intracranial Birth Injuries. W. E. Johnson, El Paso.—p. 129.
Fifty Cases of Hay-Fever Treated with Local Pollens. G. Turner, El Paso.—p. 133.
Intracutaneous Tests. R. J. Stroud, Temple, Ariz.—p. 135.
Cardiac Infarct. G. Werley, El Paso.—p. 137.
Emphysema and Tuberculosis. M. Pollak, Fort Bayard, N. M.—p. 143.
Rare Tumor Probably Hypernephroma. W. L. Brown and C. P. Brown, El Paso, Texas.—p. 147.
Gout in External Auditory Canal; Case. H. Yandell, Phoenix, Ariz.—p. 149.
Serious Brain Injury. W. L. Brown and C. P. Brown, El Paso.—p. 149.
Gangrene of Both Legs Due to Embolism. G. Werely, El Paso.—p. 150.

Tennessee State Medical Association Journal, Nashville

17: 337-363 (March) 1925

Blastomycetic Dermatitis: Case. M. M. Coplan and A. B. Litterer, Nashville.—p. 348.
Importance of Radiation in Cancer of Breast. C. M. Hamilton, Nashville.—p. 353.

U. S. Naval Medical Bulletin, Washington, D. C.

22: 401-509 (April) 1925

Mathematical Root Canal Gauge. H. E. Harvey.—p. 401.
Dental Department, United States Naval Hospital, Philadelphia.. E. H. Tennent.—p. 408.
Cooperation Between Surgeon and Dental Surgeon. L. W. Johnson.—p. 415.
Dental Record as Means of Identification. R. R. Crefs.—p. 418.
Preventive Dentistry in Navy. H. R. Delaney.—p. 428.
New Dental Ward, Naval Hospital, Norfolk, Va. P. G. White.—p. 433.
Betel Nut Chewing and Its Effects. C. R. Wells.—p. 487.
Effective Treatment for Vincent's Infection. S. M. Akerstrom.—p. 440.
Protest Against Ruthless Extraction of Teeth. P. G. White.—p. 443.
Infiltration and Nerve Blocking Technic. F. R. Hittinger.—p. 449.
Vincent's Infection. T. L. Sampsell.—p. 450.
Case of Focal Infection. P. H. MacInnis.—p. 452.
Dental Activities at Naval Training Station, San Diego, Calif. F. L. Morey.—p. 453.
Colors for Finishing Dental Operating Rooms. J. R. Barber.—p. 454.
Disinfecting and Lubricating Solution for Dental Engine Handpiece. C. H. Morris.—p. 456.

Virginia Medical Monthly, Richmond

52: 1-68 (April) 1925

Facts Every Doctor Should Know About Mortality in Appendicitis. A. M. Willis, Richmond.—p. 1.
Early Diagnosis of Intestinal Obstruction. L. G. Richards, Roanoke.—p. 4.
Dangers of Frequent and Unnecessary Examinations per Vaginum During Labor. M. B. Savage, Norfolk.—p. 5.
*Etiology of Heart Disease in Virginia. J. E. Wood, Jr., and T. D. Jones, University.—p. 8.
Necropsies as Index of Efficiency of Treatment. L. B. Wilson, Rochester, Minn.—p. 13.
Digitalis and Strychnin. G. Nelson, Richmond.—p. 18.
Diseases of Thyroid. R. C. Travel, Richmond.—p. 22.
Feeding of Infants and Young Children. I. P. Battle, Rocky Mount, N. C.—p. 27.
Management of Acute Heart Disease. F. C. Rinker, Norfolk.—p. 29.
Management of Chronic Heart Disease. C. L. Harrell, Norfolk.—p. 30.
Pathology and Symptomatology of Influenza. W. E. Jennings, Danville.—p. 35.
Medical Treatment of Influenza. I. K. Briggs, South Boston, Va.—p. 36.
Normal and Abnormal Phenomena of Thyroid. J. R. Allen, Marshall.—p. 39.
Lyon-Meltzer Nonsurgical Galibladder Drainage. G. P. Hamner, Lynchburg.—p. 41.
Plea for More Blood Sugar Examinations. W. P. Adams, Norfolk.—p. 45.
Enterostomy, Life Saver. S. O. Black, Spartanburg, S. C.—p. 47.
Some Acquired Characters. C. L. Redfield, Chicago.—p. 49.

Etiology of Heart Disease in Virginia.—In 150 cases of definite organic heart disease analyzed by Wood and Jones, five cases were in the hypertensive group; forty in the arteriosclerotic group; thirty-four in the rheumatic group, and ten in the syphilitic group. There were three cases of congenital heart disease indicating by history and physical examination some cardiac malformation since birth.

West Virginia Medical Journal, Huntington

20: 169-224 (April) 1925

Acute Abdominal Injury. C. G. Morgan, Moundsville.—p. 169.
Use of Mercurochrome in Typhoid. H. M. Hall, Wheeling.—p. 171.
Spinal Anesthesia. A. P. Butt and C. A. Greenes, Elkins.—p. 180.
Puerperal Eclampsia. Clarksburg.—p. 185.
Intestinal Obstruction Due to Round Worms: Case. C. L. Holland:—p. 190.
Melena. G. R. Nickelthwaite, Portsmouth.—p. 192.
Treatment of Syphilis. C. S. Wright, Philadelphia.—p. 194.

Wisconsin Medical Journal, Milwaukee

23: 589-644 (April) 1925

Some Easily Overlooked Manifestations of Circulatory Failure. D. Riesman, Philadelphia.—p. 589.
Hypertension in General Practice. J. H. J. Upham, Columbus, Ohio.—p. 594.
*Gentian Violet Treatment of Empyema. R. H. Major, Kansas City, Kan.—p. 602.
Interpretation of Cough Symptom. F. J. Kalteyer, Philadelphia.—p. 605.
*Untoward Reactions During Antisyphilitic Treatment of Tuberculous. B. H. Schlomovitz, Milwaukee.—p. 609.
Pulmonary Embolus. W. J. Tucker, Ashland.—p. 611.
Artificial Pneumothorax for Tuberculosis Prevails in Vienna; Mohlgaard's Publication Believed Premature. L. M. Warfield.—p. 614.

Gentian Violet Treatment of Empyema.—Major reports his experiences with the injection of gentian violet in 1:1,000 solution in the treatment of fifty-seven cases of empyema. Forty-five cases cleared up completely, and twelve patients were operated on. In all the failures treatment was not instituted in an early stage. No untoward symptoms have ever been observed following the instillation of the gentian violet.

Untoward Reactions During Antisyphilitic Treatment.—Schlomovitz' experience indicates that untoward reactions in syphilitic patients occur more readily during treatment when there is a concurrent infection present of either a tuberculous or nontuberculous nature.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Experimental Pathology, London

6: 41-90 (April) 1925

*Virus of Herpes; Immune Reactions: Relation to That of Lethargic Encephalitis. J. R. Perdrau.—p. 41.
In Vitro Cultivation of Tissues; Production of Cancer by Means of Radium and Roentgen Rays. J. C. Mottram.—p. 53.
*Tetanus. I. P. Fildes.—p. 62.
*Innervation as Factor in Experimental Production of Cancer. W. Cramer.—p. 71.
*Sexual Glands and Metabolism. II. Influence of Emulsions of Testis and Prostate on Nitrogen Metabolism of Rabbits. V. Korenchevsky and M. Carr.—p. 74.
Standardization of Antidysentery (Shiga) Serum. II. R. A. O'Brien and B. F. Runge.—p. 84.
*Specificity of Protein of Human Tears. A. Fleming and V. D. Allison. —p. 87.

Studies on Herpes Virus.—Perdrau's experimental and histologic investigation of the brain of immune animals that finally succumb to an intracerebral inoculation of the virus of herpes yielded results identical with those obtained from inoculations of emulsions of brain from cases of epidemic (lethargic) encephalitis. The majority of immunized animals which finally succumb to an intracerebral inoculation of the passage virus show symptoms recalling those of epidemic encephalitis in man, and the virus cannot be recovered from the brain.

Tetanus.—A method is described by Fildes by which tetanus bacilli may be isolated easily from diverse materials. The morphologic and cultural characters of *B. tetani* are detailed from a study of seventy-five new strains isolated by this method.

Innervation as Factor in Production of Cancer.—Observations were carried out by Cramer to test whether the presence or absence of innervation in a piece of skin had any effect on the genesis of cancer. It was found that loss of nervous control in an area of skin does not predispose to cancer. On the contrary, the presence of a peripheral nervous mechanism is an essential factor in the process of chronic irritation which leads to the development of cancer.

Prostate Secretion Influences Nitrogen Metabolism.—Experiments made by Korenchevsky and Carr with prostate emulsion suggest the presence of an inner secretion from the prostate which influences nitrogen metabolism.

Specificity of Protein of Human Tears.—The results obtained by Fleming and Allison show that in human tears there is protein which, when tested by immunologic methods, seems to be common to all samples of human tears, but is different from that of the tears of other animals. The protein of human tears, also, appears to be quite different immunologically from that in human blood serum or in the other secretions or tissues of man. These findings are in marked contrast with those of Uhlenhuth and others in their work on the proteins of the crystalline lens, but fall more into line with those of Hektoen in connection with the proteins of semen.

Edinburgh Medical Journal

32: 225-280 (May) 1925

Oxygen Therapy. H. W. Davies and A. R. Gilchrist.—p. 225.
Treatment of Malignant Diseases by Goat Serum and Oleates. A. Wilson.—p. 245.
*Congenital Cardiac Defect in Children: Cases. A. R. Macgregor.—p. 251.
Three Cases of Acute Perforating "Ulcer" of Small Intestine. J. Taylor.—p. 255.

Congenital Cardiac Defect in Children.—The interesting features of the heart in the case cited by Macgregor were, first, absence of the right atrioventricular orifice, and secondly, defects in the interauricular and interventricular septa. The heart was greatly enlarged; both atria were markedly dilated, and they communicated freely with each other through the foramen ovale, which was widely patent. There was no communication between the right atrium and the right ventricle, the right atrioventricular orifice and tricuspid valve being entirely absent. There was thus no outlet from the right atrium except through the foramen ovale. The pulmonary artery arose from it in the usual position, possessed a perfectly normal valve, and was of the usual caliber. The left atrioventricular orifice was somewhat wider than usual, but was in the natural position, and possessed a valve with two cusps, exactly resembling a normal mitral valve. The aorta was normal in every respect, as was also its valve. The ductus arteriosus was pervious, but very narrow, and obviously in process of obliteration. In the interventricular septum there were two apertures. The larger, which readily admitted the forefinger, was situated in the upper part of the septum, immediately below the aortic valve, and communicated with the infundibular portion of the right ventricle. The other, which was barely half as large, was situated near the apex, the two apertures being separated from each other by a thick band of muscular substance. No cardiac defect had been suspected in this case until the day of death, which occurred when the patient was 7 weeks old.

Indian Medical Gazette, Calcutta

60: 145-196 (April) 1925

*Combined Carbon Tetrachlorid and Oil of Chenopodium in Treatment of Hookworm Disease. A. C. Chandler and A. K. Mukerji.—p. 145.
*Clinical Studies on Digitalis in Bengal. S. C. Bose.—p. 147.
Treatment of Cholera by Cresol and Acid. F. J. Palmer.—p. 155.
Outdoor Organization of Asansol Mines Board of Health. J. W. Tomb. —p. 156.
Is Trichomonas Hominis Pathogenic? P. Ganguli.—p. 160.
Trichomonas Infection in Urine. S. K. G. Dastidar.—p. 160.
*Technic and Significance of Rosindole Reaction Applied to Urine. A. N. Kingsbury and K. Kanagarayer.—p. 161.
Intravenous Injections of Sodium Iodid in Treatment of Goiter. E. A. Davies and P. Bell.—p. 163.
Treatment of Malaria in Pregnant Women. J. Dhairyam.—p. 165.
Interesting Case of Oriental Sore. D. N. Basu.—p. 166.
Case of Acute Gastro-Duodenal Ileus. R. V. Rajam.—p. 167.
Case of Intestinal Obstruction Associated with Fossa Duodenojejunalis. J. B. Vaidya.—p. 168.
Case of Recurring and Encysted Vesical Calculus. S. K. Nathan.—p. 169.
Hemoplastin in Hemorrhage. K. P. Lahiri.—p. 169.
Two Cases of Tetanus Treated by Injections of Magnesium Sulphate and Phenol. P. D. Samuel.—p. 170.

Carbon Tetrachlorid and Chenopodium for Hookworm Treatment.—From the results obtained by them Chandler and Mukerji do not think that the addition of chenopodium to carbon tetrachlorid is of any value in pure necator infections, but the evidence, so far as it can be judged from a small number of cases, is strong that the combined drugs have a considerably more powerful effect on ancylostoma than has either drug alone. The dosage they have employed, of 60 minims of carbon tetrachlorid in milk and 15 minims of oil of chenopodium in a capsule, is considered safe for controlled patients; for field work on a large scale a smaller dose of these drugs in the same proportions might be preferable. It is significant, however, that the fatal cases of carbon tetrachlorid poisoning have always followed small doses, indicating that the condition and diet of the patient is a more important factor than the size of the dose.

Use of Digitalis in Bengal.—Of the 150 cases of heart failure clinically studied by Bose, 6 per cent. had auricular fibrillation, while 94 per cent. had normal rhythm starting at the sino-auricular node. The smallest dose of digitalis required to induce toxic effects was 9 drams, the highest was 29 gm., and the average dose was well over 14 drams. This result is partly due to loss of potency of tincture and partly to increased decomposition in the alimentary tract and liver.

Rosindol Reaction Applied to Urine.—Kingsbury and Kanagarayer describe a technic for the application of the rosindol test to urine and show that a positive result does not indicate the presence of indican in the urine. The percentage of positives is decreased in nephritic cases and increased in liver insufficiency cases.

Journal of Laryngology and Otology, Edinburgh

60: 285-356 (May) 1925

Congenital Laryngeal Stridor with Dysphagia. D. M'Kenzie.—p. 285.
Operations on Neck for Malignant Glands. N. Patterson.—p. 303.
Osteomyelitis of Flat Bones of Head: Three Cases. G. Frey.—p. 308.
Foreign Body (Bead) in Left Superior Lobe Bronchus. W. J. Harrison. —p. 315.

Journal of Obstetrics and Gynaecology of British Empire, Manchester

32: 1-200 (Spring Number) 1925

Specific Action of Lead on Chorion Epithelium of Rabbit, Contrasted with Action of Copper, Thallium and Thorium. W. B. Bell, R. A. Hendry and H. E. Annett.—p. 1.
*Abnormalities of Umbilical Cord Which May Cause Antenatal Death. F. J. Browne.—p. 17.
*Bacteriologic Examinations of Cervix and Vagina During Pregnancy; Hemolytic Streptococci. L. P. Lockhart.—p. 49.
*Vaginal Monilias and Vaginal Moniliases. A. Castellani and F. E. Taylor.—p. 69.
Intracranial Hemorrhage in 400 Consecutive Newborn Babies. W. Sharpe and A. S. Maclaire.—p. 79.
Physiology of Placenta. G. I. Strachan.—p. 89.
Diphallus in Female. B. Bell.—p. 112.
Hydatid Cyst in Pelvis Causing Obstructed Labor. B. Bell.—p. 114.
*Case in Which Fifty-Two Fibroids Were Enucleated from Uterus of Patient Aged Twenty-Four Years. V. Bonney.—p. 116.
Adenomyoma of Rectovaginal Space with Recurrent Polypi in Vagina. W. F. Shaw.—p. 118.
Adenomyoma of Round Ligament, Which Menstruated Through Inguinal Incision. W. F. Shaw.—p. 121.
Case of Eclampsia Treated by My Improved Prophylactic Method. Stroganoff.—p. 123.
Case of Double Uterus and Vagina with Unilateral Hematocolpos and Hematometra. J. St. G. Wilson.—p. 127.
Two Cases of Antepartum Rupture of Uterus Through Previous Cesarean Section Scar. K. V. Bailey.—p. 129.
New Volsellum Forceps: New Tissue Forceps. L. C. Rivett.—p. 132.

Abnormalities of Umbilical Cord Causes of Antenatal Death.—Details are given by Browne of eight cases of solid tumor of the cord. In three cases the structure was that of a telangiectatic myxosarcoma, in two it was a teratoma, in one a myxangioma, while in two others histologic investigation was not carried out.

Bacteriology of Cervix and Vagina During Pregnancy.—The series of 100 cases examined by Lockhart consisted of eighty-one primiparas and nineteen multiparas. Thirty-eight of the former harbored streptococci in the genital passages when admitted to the ward, while of the latter, ten harbored these organisms. Six of the thirty-eight primiparas developed pyrexia, while of the ten multiparas three did so. Thus of the ten cases which developed pyrexia, nine had harbored streptococci in the vagina or in the cervix when the patients were admitted to the ward. These cases suggest an intrinsic rather than an extrinsic source of infection. The existence of an unstable type of hemolytic streptococcus is suggested.

Vaginal Monilias.—In the normal vagina, monilias and other fungi appear to be constantly absent. Castellani and Taylor state that two principal types of vaginitis are associated with the presence of monilias; namely, (*a*) the membranous type, presenting white patches of membrane on the vaginal mucosa, the so-called "vaginal thrush," and (*b*) the purulent type, with thick, purulent, vaginal discharge containing enormous numbers of monilias and sometimes simulating gonorrheal infection.

Multiple Fibroids of Uterus.—Bonney reports a case in which fifty-two fibroids were enucleated from the uterus of a patient, aged 24 years. The largest was the size of a Jaffa orange.

Journal of Tropical Medicine and Hygiene, London

28: 153-168 (April 15) 1925

*Intensive Antimony Therapy in Schistosomiasis Japonica. H. E. Meleney, E. C. Faust and C. McA. Wassell.—p. 153.

Antimony Treatment of Schistosomiasis.—The series of cases treated by Meleney et al. gave evidence that tartar emetic treatment in moderately advanced cases of schistosomiasis japonica caused marked improvement and probably cure, as indicated by clinical and laboratory examinations. The blood picture improved, the liver and spleen began to recede, and the general physical condition of the patient showed a decided improvement. Tartar emetic is advocated, therefore, for incipient cases and those of the secondary stage of the infection, but caution in the use of the drug is recommended in cases with advanced cirrhosis and ascites.

Lancet, London

1: 853-904 (April 25) 1925

Rôle of Fats in Vital Phenomena. J. B. Leathes.—p. 853.
Regional Anesthesia. S. Cade.—p. 856.
Splanchnic Analgesia; Ninety-One Cases. O. S. Hillman and R. E. Apperly.—p. 863.
*Aplastic Anemia Following Treatment with Roentgen Rays. J. M. Ross.—p. 867.
Jejunostomy in Acute General Peritonitis. S. Pringle.—p. 869.

Aplastic Anemia Following Roentgen-Ray Therapy.—Ross reports a typical case of splenomedullary leukemia, in a boy, aged 11, which was converted into an aplastic anemia by roentgen-ray treatments. This is said to be the second case on record.

1: 905-956 (May 2) 1925

Industrial Fatigue. C. S. Myers.—p. 905.
Artificial Light Bath Treatment. J. H. Sequeira and W. J. O'Donovan.—p. 909.
Light in Prevention of Rickets. F. H. Humphris.—p. 912.
Tutocain: Local Anesthetic. I. Pharmacology. E. Watson-Williams.—p. 913.
Id. II. Rhinology. P. Watson-Williams and E. Watson-Williams.—p. 915.
Id. III. Ophthalmology. E. R. Chambers and G. C. Dixon.—p. 915.
Id. IV. Urology. S. H. Kingston.—p. 915.
Id. V. Dental Surgery. L. E. Claremont.—p. 916.
Outfit for Oxygen Administration. H. W. Davies and A. R. Gilchrist.—p. 916.
Diphtheria with Uncommon Complications; Two Cases. J. Todesco.—p. 917.
*True Dextrocardia; Two Cases. N. B. Capon and E. N. Chamberlain.—p. 918.

True Dextrocardia.—The case reported by Capon and Chamberlain was one of true dextrocardia without transposition of the abdominal viscera.

Medical Journal of Australia, Sydney

1: 331-358 (April 4) 1925

Treatment of Menorrhagia by Radium. R. Magarey.—p. 334.
Absent Friends. A. N. McArthur.—p. 336.
Intestinal Sarcoma. E. M. Fisher.—p. 337.
Cases Illustrating Use of Roentgen Rays. S. Verco.—p. 339.
Foreign Body (Grass Stem) in Young Man's Bladder. E. Chenoweth.—p. 340.
Unusual Case of Surgical Emphysema. V. C. Byrne.—p. 340.
Case of Syphilitic Adenitis of Neck. L. H. Hughes.—p. 340.
Melena Neonatorum. J. E. Foley.—p. 341.

Medical Journal of South Africa, Johannesburg

20: 213-254 (March) 1925

Exophthalmic Goiter in Child. M. Greenberg.—p. 215.
*Case of Purpura Fulminans. A. Machol and E. Sthamer.—p. 218.
Bismuth in Treatment of Syphilis. H. Gluckman.—p. 219.
Law and Doctor in South Africa. H. de Villiers.—p. 226.

Purpura Fulminans.—Machol and Sthamer report a case of purpura fulminans which was at first mistaken for a purely abdominal complaint and operated on on account of the then prevailing alarming symptoms, namely, colicky pains, vomiting and rigidity of abdominal muscles. The case was mistaken for one of typhoid. Death occurred on the fourteenth day. Besides hemorrhages under the skin and from the intestines there was hemorrhage from kidney and bladder; on different occasions blood oozed from the penis. The urine, on microscopic examination revealed an acute nephritis. This complication was the main cause of death.

Practitioner, London

114: 317-384 (May) 1925

Physiology of Wound Repair. S. Wright.—p. 317.
Toxic Factor in Disease; Chronic Rheumatic Conditions and Diabetes. W. Willcox.—p. 326.
Effect of Chronic Sepsis on Central Nervous System. H. A. Cotton.—p. 335.
Rickets and Deprivation of Sunshine and of Ultraviolet Light. A. R. Tubby.—p. 343.
Significance of Albuminuric Retinitis in Chronic Renal Cirrhosis. A. M. Ramsay.—p. 354.
Importance of Early Recognition of Urethral Strictures of Large Caliber. H. L. Attwater.—p. 357.
General Practitioner's Experience of Lunacy Certification. J. B. Lawson.—p. 362.
Treatment of Psoriasis by Mercury Vapor Lamp. W. F. Castle.—p. 373.

South African Medical Record, Cape Town

23: 113-136 (March 28) 1925

Exophthalmic Goiter in Child. M. Greenberg.—p. 118.
*Use of Saturated Organisms (Saturation Test) in Diagnosis. L. J. Orpen.—p. 120.
Medical Practitioner as Business Man. C. H. Kruger.—p. 121.
Therapeutic Uses of Calcium. H. F. B. Walker.—p. 125.

Tumor of Spinal Cord Located by Roentgen-Ray Examination. A. Abelheim.—p. 127.

Saturation Test in Diagnosis.—Orpen found that he could obtain specific organisms which will only agglutinate with a given serum, i. e., by treating a melitensis organism with a heated abortus serum an organism is obtained which will only agglutinate with melitensis serum. Orpen has therefore, devised the "saturation test," which in actual practice is performed as follows: A suspected typhoid case occurs, which agglutinates both typhoid and paratyphoid, so that the diagnosis is doubtful. A known typhoid organism is kept in stock which has been saturated with heated paratyphoid serum, and consequently only agglutinates with typhoid. This organism is tested against the patient's serum in a single dilution of any fairly low titer. A positive result (agglutination) can only mean typhoid. Similar tests would be made, as usual, at the same time with paratyphoid or other organisms similarly saturated with allied serums.

Annales de l'Institut Pasteur, Paris

39: 197-297 (March) 1925

*Action of Arsenic Alone on Malaria. E. Marchoux.—p. 197.
*Pathogenesis of "Internal" Anthrax. G. Sanarelli.—p. 209.

Action of Arsenic Alone on Malaria.—The susceptibility of the tertian parasite to the arsenic treatment and the absence of effect on the quartan and tropical plasmodia are, Marchoux says, further proof that there are several malaria germs, which should be regarded as three distinct species, not three varieties of the same species.

Pathogenesis of "Internal" Anthrax.—Sanarelli says that the anthrax spores in the alimentary canal of animals are unaffected by the gastric juice, but they are unable to proliferate in the intestinal juices. They cannot proliferate in the presence of colon bacilli or their secretion products. "Intestinal mycosis" is thus excluded. By injection in a spray through the nose, definite doses of anthrax germs may be introduced into the lungs without injury to skin or mucosa. With excessive doses (100,000 spores), the spores proliferate, invade the blood and cause septicemia. In sublethal doses, they lurk, latent, in various organs but may be influenced to proliferate and produce the general infection called "internal" anthrax, by the introduction of substances capable of producing necrotic foci. This can best be accomplished by provocative injections into the spleen twenty-four hours after injection of the spores into the lungs. The lesions of the digestive apparatus in anthrax, as seen at necropsy, are of blood-borne origin. Such lesions, particularly in Peyer's patches, often lead to hemorrhagic necrosis. Six colored plates illustrate the findings in his research.

Annales de Médecine, Paris

17: 89-200 (Feb.) 1925

Acid-Base Balance in the Blood. E. J. Bigwood.—p. 89.
*Blood Glucose Tolerance Test. M. Labbé.—p. 116.
*Hyperuricemia in Gout. M. P. Weil.—p. 134.
Fractional Study of Stomach Secretion. Labbé and Meurdrac.—p. 158.
Duodenal Intubation in Diagnosis and Treatment. Labbé et al.—p. 177.

Alimentary Hyperglycemia as Glucose Tolerance Test.—Labbé analyzes the clinical value of the induced hyperglycemia test in different affections. It is far more dependable than the alimentary glycosuria test. He emphasizes that a strongly pronounced reaction to glucose may persist in diabetes after the glycosuria has disappeared. It shows that the derangement of the glucose balance may become latent, but still persists under the treatment. Consequently the test hyperglycemia may be the only means for revealing a masked diabetic condition. The reaction is frequently exaggerated in obesity and liver disease, although less than in diabetes. In liver disease, however, the test mirrors only the glycogen producing function of the liver, but not the organic condition of the organ. The test is positive in hyperthyroidism, but is less characteristic than the basal metabolism. The test demonstrates a pronounced and constant disturbance of the carbohydrate balance in arterial hypertension. A prediabetic condition exists in infectious diseases, which may entail true diabetes later. The response was exaggerated in sixteen of nineteen pregnant women. No positive findings were obtained in cancer cases or with lesions of the suprarenal glands. The induced hyperglycemia test is particularly useful in excluding diabetes, especially in children presenting glycosuria. He uses only 50 gm. of pure glucose in 100 c.c. of water, with a teaspoonful of lemon juice. The patient drinks 100 c.c. of water every half hour thereafter. For children the dose is 25 gm.

Hyperuricemia and Acute Attacks of Gout.—Weil presents evidence that the acute attack in the joints in gout is a colloidoclastic shock, independent of deposits of urates from the oversaturation of the blood with uric acid.

17: 201-284 (March) 1925

Primary Pulmonary Emphysema. L. Bard.—p. 201.
Contamination of Fetus with a Few Tubercle Bacilli. R. Debré and M. Lelong.—p. 209.
Poisoning from Mussels. N. Fiessinger and A. Ravina.—p. 235.
*Metabolism in Pituitary Syndromes. M. Labbé et al.—p. 258.
*Extrapleural Thoracoplasty. J. Valtis.—p. 271.

The Basal Metabolism in the Pituitary Syndrome.—In ten cases examined, Labbé, Stévenin and Bogaert found a slightly exaggerated metabolism in two patients with typical acromegaly, while in three instances of slight acromegaly the metabolism was normal or below. The basal metabolism tests do not have the same significance in diagnosis of pituitary lesions as in the thyroid syndromes.

Results of Extrapleural Thoracoplasty in Treatment of Pulmonary Tuberculosis.—Valtis compares the statistics from different countries, saying that 30 per cent. of the patients followed for eight or ten years were cured and 30 per cent. improved. This shows that the intervention has a promising future in suitable cases.

Archives des Maladies du Cœur, etc., Paris

18: 113-192 (March) 1925

Rôle of Diastolic Action in Heart Disease. L. Bard.—p. 113.
*Oculocardiac Reflex and Heart Block. M. Petzetakis.—p. 129.
Hill and Teissier's Phenomena in Aortic Insufficiency and Abdominal Aortitis. N. Betchov.—p. 137.
Septicemia in Syphilitic Aortitis. R. Lutembacher.—p. 142.
Case of Pneumococcus Endocarditis. Lutembacher and Bertillon.—p. 145.

Effect of Oculocardiac Reflex on Auriculoventricular Conduction.—Petzetakis says that with hyperexcitability of the vagus from any cause, compression of the eyeball can induce disturbances of auriculoventricular conduction independent of any lesion of the conducting system.

Bulletin Médical, Paris

39: 403-430 (April 11) 1925

*Metallic Second Aortic Sound. L. A. Amblard.—p. 409.
Medical Impressions of America. M. Thalheimer.—p. 412.

Metallic Second Aortic Sound.—Amblard says that lesions of the aortic orifice not resulting from recent infectious disturbances are frequently of syphilitic origin. When, in a patient over 40, an echoing, metallic, sharp aortic sound is noted, with or without increased arterial tension and diastolic murmur, syphilis should be taken into consideration.

39: 433-460 (April 18) 1925

*The Bacteriophage. P. Hauduroy.—p. 439.
Mortality in Early Infancy. Veyrières.—p. 446.

The Bacteriophage.—Hauduroy reviews what has been accomplished so far with the bacteriophage in therapeutics. He found that under the action of the bacteriophage ordinary bacteria can become transformed to the point of invisible elements small enough to pass through the filter. These elements become transformed anew into visible forms which soon return to the original type.

Bulletins de la Société Médicale des Hôpitaux, Paris

49: 535-594 (April 3) 1925

*Pernicious Anemia from Radium. Weil and Lacassagne.—p. 535.
Fatal Case of Kala-Azar. A. Lemierre et al.—p. 537.
*Diabetes in Pregnant Woman and in Fetus. Ambard et al.—p. 547.
*Fibrosis from Induced Pneumothorax. Morelli.—p. 556.
*Only One Kind of Virus in Syphilis. Sézary and Margeridon.—p. 562.
*Immunity from Antidiphtheria Anatoxin. Darré et al.—p. 565.
*Scurvy in Infant. J. Comby.—p. 567.
*Organotherapy in Raynaud's Disease. H. Claude and J. Tinel.—p. 570.
Amebiasis of Left Lung. Dargein and G. R. Doré.—p. 590.

Aplastic Pernicious Anemia Due to Radium.—Weil and Lacassagne observed a case in a man, aged 40, working for four years in the manufacture of radioactive preparations from thorium. Death followed a five months' illness.

Diabetes in Pregnancy and Congenital Diabetes in Infant.—A woman, aged 35, with grave diabetes, gave birth (eighth month) to an infant with diabetes (12 gm. of sugar per liter of urine). The mother died in a few hours, the child, after twenty-three hours. Necropsy showed lesions in the maternal and in the fetal pancreas. Evidently the diabetes developed in the woman because the pancreas deficiency was not compensated by the affected fetal pancreas. The fatal outcome, after hyperglycemia had disappeared under insulin treatment, is ascribed by Ambard and his co-workers to lesions of the liver and kidneys, caused by transient acidosis.

Artificial Pneumothorax Inducing Fibrosis in Lung.—Morelli refers to his three cases of tuberculosis treated by pneumothorax, with consecutive pleural adhesions, inducing diffuse fibrosis in the lung, and lasting recovery. Heliotherapy, applied as soon as the pneumothorax was discontinued, may have played a part in the healing. He did not succeed in provoking fibrosis by combining the pneumothorax with the use of tannin, ergot, epinephrin, calcium, and silicic acid.

Common Factor in Neurotropic and Dermotropic Syphilis.—Sézary and Margeridon describe cases of syphilis in mother and daughter, aged respectively, 53 and 21. The mother was affected with tabes, the daughter, born with a specific eruption, presented sequelae of keratitis and perforation of the palate. Obviously the same kind of spirochete induced neurotropic syphilis in one woman, dermotropic in the other.

Antitoxic Property of Serum from Persons Vaccinated with Diphtheria Anatoxin.—Darré, Loiseau and Laffaille report their observations during eleven, twelve and thirteen months on diphtheria immunization in three subjects. Römer's method was used for estimation of the antitoxic value of their serum. After inoculation with anatoxin there was increased and persistent resistance to the diphtheria toxin. Nine units of antitoxin were found thirteen months after the inoculation, five units after a year, half a unit after eleven months. The interference of repeated slight diphtheria infections, stimulating the antitoxic property, was positively excluded.

Diagnosis of Scurvy in Infant.—Comby treated a case of scurvy in a girl, aged fourteen months. The diagnosis was not established earlier, although several physicians had examined the infant during the previous month. A painful pseudoparaplegia and ecchymoses of the gums, occurring in a child fed with canned milk or with proprietary foods, should suggest the diagnosis of scurvy.

Organotherapy in a Case of Raynaud's Disease of Mental Origin.—In Claude and Tinel's patient, aged 36, phenomena of Raynaud's syndrome followed a four months' period of nervous disturbance owing to an accident. Crises of vasodilatation alternated, and several times coincided with attacks of angiospasm. The angiospastic crises, predominating in the patient, revealed a local surface hyperexcitability of nervous origin. A condition of sympathicotonia seemed to exaggerate the angiospastic irritability of the peripheral centers. It is probable that the good results after administration of pituitary and ovarian extracts were due not only to the induced hypervagotonia, but also to a favorable action on the peripheral centers. The crises disappeared the second day, after one dose of pituitary extract by mouth. After a daily dose of from 0.6 to 1 gm. for twelve days the treatment was continued with 0.6 gm. of ovary extract till the end of the month. The pituitary extract was used in decreased doses of 0.3 and 0.2 gm. the following eight weeks. No recurrences were noted during a year.

Comptes Rendus de la Société de Biologie, Paris

92: 1013-1088 (April 10) 1925. Partial Index

*Complement Fixation in Herpes. K. Todorovitch.—p. 1017.
*Action of Ultraviolet Rays on Hemoglobin. H. Benard et al.—p. 1031.
*Differentiation of Spirochetes. Jeantet and Kermorgant.—p. 1036.
*Complement Fixation in Beriberi. P. Noël-Bernard.—p. 1038.
*Physiologic Epinephrinemia. A. Tournade and M. Chabrol.—p. 1041.
*Tuberculin Treated with Formaldehyd. A. Bouveyron.—p. 1045.
*Filtration of Streptococcus Toxin. Zoeller and Manoussakiss.—p. 1046.
*Resuscitation by Epinephrin. Bardier and Stillmunkes.—p. 1048.
*Symbiosis of Colon Bacillus with Bacteriophage. J. Kabelik.—p. 1057.
*Chemotaxis of Bacteriophage. J. Kabelik and K. Kukula.—p. 1058.
*Action of Oxygen on Metabolism in Amphibians. L. Drastich.—p. 1066.
*Intraspinal Injection of Insulin. I. I. Nitzescu.—p. 1076.

Complement Fixation in Herpes.—In the serum of five subjects with herpes the fixation reaction was negative with the antigen from a crust emulsion, as well as with the antigen from the blister fluid. Repeated tests in serum of three monkeys, inoculated with herpes, showed a negative reaction with the crusts and a positive with the blister fluid. The reaction was constantly negative with either antigen in six patients with chickenpox.

Action of Ultraviolet Rays on Hemoglobin Treated with Carbon Monoxid.—In Benard and the Biancanis' experiments, the hemoglobin in a solution of human and also of animals' laked blood had been treated with carbon monoxid. Half of the fluid was exposed to ultraviolet rays. The irradiation caused changes in the solution in from thirty to sixty minutes, with loss of the carbon monoxid. Mixed with lye, ammonium sulphydrate, or with sodium hyposulphite, the solution showed the spectrum of reduced hemoglobin, while in the control solution a spectrum with the two characteristic carbon monoxid bands was manifest. Evidently, in accordance with Berthelot, the carbon monoxid under the influence of the rays takes up oxygen and is transformed into carbon dioxid.

Features Differentiating the Spirochaeta Pallida.—Jeantet and Kermorgant point out that, contrary to the classic theory, the body of *Spirochaeta pallida* does not look like a coil wound round an axis, but presents a series of wavelike curves, all in the same plane. Consequently, the movements of *Spirochaeta pallida* are not spiral, like a screw. Under the action of the terminal cilium, the parasite moves by balancing the whole body.

Deviation of Complement in Beriberi.—N. Bernard made his research with anaerobic cultures of *Bacillus asthenogenes* on the serum of 131 Asiatics. The reaction was positive in 72.46 per cent. of seventy-six beriberi patients presenting the characteristic polyneuritis or edema. The reaction proved negative in 96.36 per cent. of fifty-five control subjects.

Epinephrinemia a Physiologic Phenomenon.—Describing the experiments on dogs with one or both suprarenal capsules removed, Tournade and Chabrol affirm that the amount of epinephrin poured out into the blood by a normal gland has an unmistakable physiologic rôle in the organism.

Associated Action of Formaldehyd and Heat on Tuberculin.—Bouveyron relates that tuberculin submitted to a prolonged simultaneous action of formaldehyd and heat (about 39 C.) loses its toxic property. Used after a month, it is unable to induce a skin reaction in subjects with otherwise very pronounced response.

The Dick Pseudoreaction.—Zoeller and Manoussakiss describe a method analogous to Huntoon's but, they say, more rapid and simpler, for purification of streptococcus toxin, by using sodium chlorid and acetic acid for precipitation and neutralization. The nonfiltered products of hemolytic streptococci, from diseases other than scarlet fever, may induce a pseudoreaction resembling the Dick test. Error may be avoided by filtration. The latter helps also in differentiating, from a pseudoreaction, a retarded reaction appearing on the third day.

Experimental Resuscitation of Heart with Epinephrin.—Bardier and Stillmunkes succeeded with intracardiac injection of epinephrin in reviving dogs that had succumbed to chloroform anesthesia poisoning when the rhythm of the heart at death had been slow and irregular and the contractions extremely weak. Syncope, from the association of the epinephrin and the chloroform, often followed the injection, even when the contractions of the heart had become normal and the blood pressure had risen. The injection failed when it coincided with fibrillation of the heart or soon followed it.

Reciprocal Protection from Association of Bacteriophage with Colon Bacilli.—Kabelik noted that colon bacilli culti-

vated simultaneously with the bacteriophage in glucose broth were not destroyed by the bacteriophage, since they still showed unmodified vitality two weeks later, while colon bacilli without the bacteriophage died in the same medium in three to five days. The bacteriophage also maintained its vitality in simultaneous cultures with colon bacilli, while cultivated alone, the bacteriophage became devitalized in three days.

Chemotaxis of Bacteriophage.—Kabelik and Kukula detail their tube procedure which apparently demonstrates that the bacteriophage may be actively motile.

Action of Oxygen Pressure on the Development of Amphibians.—Drastich recalls his research showing, in accordance with Babak, the influence of the oxygen pressure on the development of the breathing surfaces and metabolism in larvae of *Salamandra maculosa*. In an environment poor in oxygen, the products of incomplete oxidation cause retention of water in the tissues, and a consecutive enlargement of the gill respiratory surfaces. Low oxygen pressure affects also the metabolism in the new-born animal due to an insufficient utilization of nutritive substances. The functioning of the endocrine glands may also be disturbed by the defective oxidation from a low oxygen pressure.

Intraspinal Injection of Insulin in Dogs.—Nitzescu injected insulin intraspinally in twelve dogs. The injection did not induce hypoglycemia at all in some, and in the others the hypoglycemia was slight. Pronounced hypoglycemia was rare, and occurred only with large doses.

Journal de Chirurgie, Paris

25: 257-384 (March) 1925

*Perforation of Gallbladder. A. Gosset et al.—p. 257.
*Technic in Total Colpectomy. C. Dujarier and M. Larget.—p. 283.

Perforation of Gallbladder.—Gosset, Desplas and Bonnet analyze 111 collected cases of perforation of the gallbladder into the open peritoneum, all operatively treated, with a mortality of 52.2 per cent. This figure is below the actual deaths, as it includes only published cases. Thirty-three had a history of gallstones; eight, of gastric disturbances, probably from the lithiasis. The perforation was usually spontaneous; in four instances preceded by some physical effort. Perforation of the gallbladder into the free peritoneum is graver than perforation of a gastric or duodenal ulcer, because the clinical picture is less known and less often diagnosed. Forty cases are summarized, including four unpublished cases, all fatal.

Total Colpectomy for Complete Genital Prolapse in Elderly Women.—Dujarier and Larget performed this operation (Müller) in fifteen cases, with no mortality, and excellent remote results. A solid fibrous canal replaces the vagina, and the formation of a firm fibrous ring at the level of the extirpated vagina prevents recurrence. The complication of prolapse of the rectum after colpectomy to correct extensive prolapse of the uterus has been reported in one instance.

Paris Médical

55: 329-344 (April 11) 1925

Lambliasis. C. Dopter.—p. 329.
Psychology of Effort. Bellin du Coteau.—p. 334.
*Nonsurgical Drainage of Biliary Tract. H. Gaehlinger.—p. 339.

Medical Drainage of Biliary Tract.—On the basis of his results in sixty-five cases, Gaehlinger asserts that a 10 to 15 per cent. solution of magnesium sulphate in from 50 to 100 c.c. of mineral water (Châtel-Guyon), taken fasting, for at least three consecutive days, usually induces complete nonsurgical drainage of the biliary tract. The procedure is well borne.

Presse Médicale, Paris

33: 481-496 (April 15) 1925

Reflux Sign in Heart Insufficiency. C. Lian and A. Blondel.—p. 481.
*Skin as Portal of Entry for Tuberculosis. A. Campani.—p. 482.
The p_H Test for Dicalcium Phosphaturia. Lescoeur and Violle.—p. 483.

Direct Connection Between Skin Infection and Pulmonary Tuberculosis.—Campani found that out of 300 tuberculous patients examined, 72 had a history of furuncles or carbuncles; 21, phlegmons, and 87, septic wounds. The lung presumably first affected, was in 78 per cent. of the cases on the side of the surface infection. The skin, particularly of the neck, may be a point for invasion of the lung with tubercle bacilli. He believes that in the future a simultaneous vaccination with a polyvalent and a specific antiserum should be regularly used in patients with an infectious skin process, exposed to contagion with tuberculosis.

33: 497-520 (April 18) 1925

*Choledochotomy for Gallstones. A. Gosset.—p. 497.
Value of Iodized Oil in Roentgenography of the Air Passages. E. Sergent and P. Cottenot.—p. 500.

Technic and Outcome of Choledochotomy for Gallstones.—Analyzing the results of an operation on the common bile duct in 118 cases, Gosset reports that among patients with a mild jaundice, slight lesions of the liver, and without fever, the mortality was 5 per cent. Among those with jaundice for two months or more, and those with fever, the mortality was 15 per cent. His series included twenty-five men.

Revue Française d'Endocrinologie, Paris

3: 1-88 (Feb.) 1925

Classification of Thyroid Conditions. M. Lucien et al.—p. 1.
Suprarenal Syndromes. N. Pende.—p. 9.
Endocrine Glands Before Puberty. M. Kern.—p. 26.
*Endocrine Glands and Dermatoses. A. Winstel.—p. 37.

Endocrine Disturbances and Dermatoses. — Those of Winstel's cases of psoriasis, eczema, alopecia, prurigo, and erythema with established endocrine disturbances responded to organotherapy.

Revue Franç. de Gynécologie et d'Obstét., Paris

20: 161-184 (March 10) 1925

Two Monsters of Same Type, Brothers, Born Two Years Apart. E. Zarate and V. Widakowich.—p. 161.
*Coiling of Umbilical Cord. J. R. Henry.—p. 169.
Preoperative Blood Transfusion in Ruptured Tubal Pregnancy. Vergoz and Planty.—p. 171.
The Frèze Forceps for Obstetric Sutures. E. Gaujoux.—p. 173.

Two Cases of Coiling of Umbilical Cord.—Henry's cases, both with the cord coiled eight times, presented pathogenically opposite conditions. In one (with fatal compression of the fetus) there had been dripping of amniotic liquid for 108 days. In the other (with normal delivery of a living child), there was hydramnios.

Revue Neurologique, Paris

32: 297-399 (March) 1925

*Subjective Symptoms in Diagnosis. J. Babinski.—p. 297.
Roentgenotherapy of Nonoperated Tumors of Spinal Cord. E. Flatau.—p. 311.
Extrapyramidal Syndromes. A. Wimmer.—p. 322.
Achilles' Reflex in Extended Leg. G. Soderbergh.—p. 328.
*Adipose-Genital Syndrome and Polyuria. Urechia and Elekes.—p. 330.
Pseudoparaplegia from Unilateral Cerebral Lesion. Vincent et al.—p. 337.

Diagnostic Value of Subjective Symptoms.—While Babinski emphasizes their importance, he warns by concrete examples of the danger of imposing a subjective syndrome by suggestion, not only in neurologic but in all clinical fields. The history of the alleged stigmata of hysteria he considers a particularly good illustration. By careful avoidance of any possible suggestion in his questions, in his examination of patients with hysteria during the last eighteen years he has not encountered a single instance of hemianesthesia. Morax says the same of concentric restriction of the visual field. The perimeter and finger tests do not harmonize, and for years he has not observed a case of concentric restriction of the field of purely functional origin. Pain of a radicular type is often the first manifestation of Pott's disease; vertigo, of disease in the internal ear. Difficulty in recognizing objects by handling them or difficulty in buttoning a garment is sometimes the precursor of hemiplegia.

Adiposogenital Syndrome and Polyuria.—Urechia and Elekes here report a case of congenital hydrocephalus, polyuria and the adiposogenital syndrome in a girl of 14, with the pituitary intact, and the tuber cinereum compressed and flattened by the intraventricular tension. The nuclei of the tuber region showed grave cellular lesions.

Schweizerische medizinische Wochenschrift, Basel

55: 333-356 (April 16) 1925

Occupational Eczema and Insurance Practice. D. Pometta.—p. 333.
Ophthalmologic Examination of Recruits. R. Birkhäuser.—p. 336.
*Edema from Vascular Spasm. G. Schorer.—p. 340.
Study of Neuroses. P. Maag.—p. 346.

Unusual Phenomena with Angioneurotic Edema.—Schorer observed, in 1923, 125 cases of edema from vascular spasm, which presented a recurring acute circumscribed form or a chronic and diffuse form or variable course. The acute edema was accompanied by itching, and in most cases there was a history of urticaria. Extreme tenderness on pressure and pronounced pain in response to pinching were characteristic phenomena in the patches of chronic edema. Certain cases were associated with attacks of severe abdominal pains or complicated with nephritis. One woman, inclined to vegetative neuroses, developed after an injection of antitoxin severe multiple anaphylactic phenomena, some persisting for years. Besides mental or mechanical causes, a special predisposition, seasons and atmospheric changes seemed to be important factors. The edema appeared more often in the spring, and between 3 and 6 a. m., namely, at the time of the maximal conduction of electricity in the air.

Riforma Medica, Naples

41: 217-240 (March 9) 1925

Surgery of Gastric and Duodenal Ulcer. D. Taddei.—p. 217.
*Botelho's Reaction. G. Giauni.—p. 219.
Resection of Neck of Bladder in Retention of Urine. Nicolich, Jr.—p. 222.
Dietotherapy of Alimentary Anaphylaxis. A. Iappelli.—p. 224.

Botelho's Reaction.—Giauni concludes that Botelho's reaction is not specific for cancer. It was positive in 71 per cent. of cancer patients, but also in 35 per cent. of the controls—especially those with disintegration of tissues.

41: 241-264 (March 16) 1925

*The Vegetative Innervation. N. Pende.—p. 241.
The Liver in Weil's Disease. V. Vanni.—p. 244.
Preventive Treatment of Tetanus. O. Cignozzi.—p. 245.
*Etiology of Cancer. N. Mori.—p. 249.
Roentgen Treatment of the Tonsils. C. Guarini.—p. 252.

The Vegetative Innervation in Diagnosis and Treatment.—Pende regards nutrition and reproduction as functions of the parasympathetic system. Processes of defense and aggression against the surroundings are regulated by the sympathetic. The former enhances glycogen formation in the liver and its utilization. It congests the sex organs through the pelvic nerve. The sympathetic accelerates the heart beat, raises the blood pressure and heat production as well as the thrombokinase and blood calcium, and mobilizes the sugar. Goldstein attributes to the vagus the states of euphoria and hypomaniacal excitement; the sympathetic causes general catabolism, irritability, aggressiveness and sadness. Dryness of the mouth and insufficient digestive secretion are due to sympathicotonia. Fever cannot be produced if the vegetative centers in the tuber cinereum are destroyed. The sympathetic raises the body temperature by increasing the production of heat and decreasing heat dissipation. The action of the parasympathetic is exactly the reverse. The former prevails in fever; the latter, in defervescence. There are, however, some distinctly vagotonic infections with depression of the sympathetic: diphtheria, typhoid, influenza. The relative bradycardia, hypotension, and dilatation of blood vessels, especially of the internal organs, may be explained by it. Remedies which stimulate the parasympathetic—such as the diaphoretics (salicylates)—easily cause collapse in these conditions. The tuberculous are sympathicotonic at first, and in the late stages are vagotonic, which means a grave prognosis. If the vagotonia is present from the very beginning, the tuberculosis is comparatively benign. Vagotonia dominates in asthma, angioneuroses, hypothermia and alimentary anaphylaxis conditions. The urine of these subjects contains much brick-dust sediment, phosphates, carbonates and oxalates. Everybody is physiologically "vagotonic" at night. Hence the exacerbations of bronchial and cardiac asthma, angina pectoris, pavor nocturnus, erections and pollutions, and beginning of labor.

Etiology of Cancer.—Mori reports cultures of microorganisms resembling those of Di Cristina, Caronia and others, which he obtained from eleven deep cancers of the breast.

Anales de la Facultad de Medicina, Montevideo

9: 1085-1211 (Dec.) 1924

*Surgical Treatment of Exophthalmic Goiter. D. Prat.—p. 1085.
Peptic Ulcer; Two Cases. A. Lamas.—p. 1147.
*Torsion of Great Omentum. A. Fossatti.—p. 1155.
*Tabetic Joint Disease. J. Cunha and J. M. Estapé.—p. 1161.
Hydatid Cyst in Lung. M. Albo and J. C. Del Campo.—p. 1174.

Surgical Treatment of Exophthalmic Goiter.—From Prat's experience with seventeen cases in men and seventeen in women, he asserts that partial thyroidectomy in exophthalmic goiter has such a low death rate and such brilliant results that practitioners should not linger overlong on medical measures if no improvement is manifest. Sympathectomy proved successful in a few cases, but benefit from this is irregular and not dependable. Ligation of arteries is merely a preliminary to a more complete operation. Almost 80 per cent. of his patients were completely or nearly cured; in the others the meager benefit was due to the overtimid operation or the advanced stage of the disease.

Torsion of the Great Omentum.—Fossatti's patient had a left inguinal hernia and retained testis. He suddenly developed severe pain in the region, with persisting tendency to faint, the abdomen enlarged and tender, and a large tumor in the hernia region, all explained by torsion of the omentum. The man recovered after resection of the inflamed and gangrenous areas of the omentum.

Tabetic Joint Affection.—The left knee became swollen and painful as the first and long the only manifestation of tabes. There was no history of syphilis, negative Wassermann reaction, but on having the man remove his shoes a trophic lesion was evident on the right foot, and the roentgen rays revealed syphilitic changes in the periosteum.

Semana Médica, Buenos Aires

1: 617-672 (March 19) 1925

Uterovaginal Tamponing Device. J. A. Beruti.—p. 617.
Blood Parasites in Argentina. P. Mühlens.—p. 622.
*Madelung's Deformity. O. F. Mazzini.—p. 626.
Trachoma in Northern Argentina. E. de la Vega.—p. 639.
Primary Tumors of the Facial Bones. R. Dellepiane Rawson.—p. 652.
Advantages of Diathermy or Sodium Nitrite in Treatment of Intermittent Claudication. Lian and Barrien.—p. 654.
Works on Plasmogenesis in 1924. A. L. Herrera.—p. 655.

Madelung's Deformity.—Mazzini's case confirms that curvature of the radius is the primary factor in Madelung's deformity. He warns against surgical treatment, as the results have been poor and not lasting. Orthopedic measures are more promising.

Dermatologische Zeitschrift, Berlin

43: 127-252 (March) 1925

Tuberculids. K. Herxheimer and H. Martin.—p. 127.
Bilharziasis of the Bladder. A. Stühmer.—p. 132.
Kahn's Flocculation Test. H. Boas.—p. 140.
*Gonorrhea in the Female. K. v. Neergaard and Schärer.—p. 149.
Case of Massive Bismuth Overdosage Without Injury. Bruck.—p. 178.
Cerebrospinal Fluid in Treated Syphilis. H. Mietling.—p. 180.
The Linser Treatment of Varicose Veins. E. Kottmaier.—p. 186.

Colloidal Rods with Silver Deposit in Treatment for Gonorrhea in the Female.—In their experiments, Neergaard and Schärer employed as base 1 part of gum arabic, 2 parts of tragacanth mucilage and 2 parts of glycerol, profusely medicated with silver nitrate. On the insertion of the expansible colloid rods in the cervix and urethra the mucosa stretches out smooth and becomes hyperemic, and the nascent silver chlorid, together with the silver nitrate, acts on the germs. In the 200 cases treated by this method, the gonococci usually disappeared rapidly; no complications were noted during the treatment.

Deutsche medizinische Wochenschrift, Berlin

51: 589-630 (April 10) 1925

*Pathogenesis of Syphilitic Blood Change. H. Sachs et al.—p. 589.
*Nature of Specific Hemolysins. F. Klopstock.—p. 592.
*Production of Autohemolysin. M. Nanba.—p. 594.

Active Modification of Wassermann Reaction. R. Griesbach.—p. 595.
*Oligodynamic Antibacterial Action of Metals. Buschke et al.—p. 595.
*Clinical Valuation of Bone-Marrow Function. V. Schilling.—p. 598.
*Lactic Acid Metabolism in Diabetes. Collazo and Lewicki.—p. 600.
*Pathologic Anatomy of the Sympathetic. Staemmler.—p. 603.
Treatment of Epilepsy with Luminal. Ostmann.—p. 605.
*Large Doses of Neo-Arsphenamin. Teodosijevits.—p. 608.
Toxic Rash in New-Born. H. Kaufmann.—p. 608.
Observations in Twins. Leven.—p. 609.
Fundamentals of Physical Chemistry. L. Pincussen.—p. 609.
*Statistics on Congenital Syphilis. J. Cassel.—p. 612.
Social Service Training of Physicians. A. V. Knack.—p. 614.
Xenophon, Claudius' Physician and Murderer. B. Laquer.—p. 616.
Serum Treatment of Cancer. H. Elsner.—p. 624.

Pathogenesis of Syphilitic Blood Change.—Sachs, A. Klopstock and Weil injected rabbits with a mixture of hog serum and an alcoholic extract from rabbit kidneys. The serum from the injected animals gave a strong Wassermann and Sachs reaction, and also showed flocculation with lecithin solutions. They believe that lipoids—including the animal's own lipoids—are full antigens, but that this function is masked by their association with the proteins of the body. In combination with foreign proteins (hog serum, spirochetes), they can develop their action. They had similar results with lecithin, but not with tuberculin.

Nature of Specific Hemolysins.—F. Klopstock believes that specific hemolysins are ferments, and therefore composed of a colloid carrier and a strictly chemically acting group. They are adsorbed by substances of opposite electric charge, and must be therefore of amphoteric nature. They may be regained by an alkaline solution (1 per cent. disodium phosphate) from kaolin, and by an acid solution (monosodium phosphate) from aluminum hydroxid. The specificity may be due to a split product of the antigen as part of the hemolysin, in analogy to the theory that the bacteriophage is split off from the germ it dissolves.

Production of Autohemolysin.—Nanba injected an emulsion of organs of various animals in rabbits. About one third of them produced autohemolysins which differed from those observed in paroxysmal hemoglobinuria only by being thermolabile. Cooling one ear caused local hemolysis in such a living rabbit. The hemolysin is not identical with Forssmann's, because their strength is not parallel, and it can be produced by injections of beef kidney. Positive results were obtained with liver and especially kidney from the guinea-pig, dog, horse and cattle. Organs from the hog and rabbit gave negative results.

Oligodynamic Antibacterial Action of Metals.—Buschke, Jacobsohn and E. Klopstock obtained a full growth of bacteria around a piece of thallium when the access of air and subsequent oxidation of the metal were prevented. They conclude that the oligodynamic action depends on the solution (by oxidation) of the metals. The germs are killed by a combination of direct action on proteins by the metals, and catalysis of their oxidation with subsequent dehydration.

Clinical Valuation of Bone-Marrow Function.—Schilling here concludes his study on the bone marrow. Influenza entails hardly any shifting of the nuclei in the blood and bone marrow. Typhoid with its strong shifting in the blood may present a promyelocytic change of the marrow. Pathologic constellations of white corpuscles are more constant than the physiologic pictures.

Lactic Acid Metabolism in Diabetes.—Collazo and Lewicki found an almost equal amount of lactic acid in the blood of fasting healthy subjects (14.2 mg. per hundred cubic centimeters) and diabetes patients (15.9). Ingestion of sucrose produced an increase of the lactic acid in diabetics early, and it lasted long. In healthy subjects, the rise occurred after forty-five minutes. Simultaneous injection of insulin and ingestion of sugar produced an increase in all the subjects. Insulin alone lowered the level of lactic acid in the majority of the cases.

Pathologic Anatomy of the Sympathetic.—Staemmler reviews the literature and concludes that an acute diffuse degeneration of the sympathetic ganglions may paralyze the blood vessels. A chronic degeneration might cause spasms of arteries which might lead to arteriosclerosis.

Large Doses of Neo-Arsphenamin.—Teodosijevits confirms Rosentul's good results with injections of large doses of neo-arsphenamin (0.75-0.90 gm. for men; 0.60-0.75 for women) in a 10 per cent. calcium chlorid solution. Shocks occurred in several of his 100 cases.

Statistics on Congenital Syphilis.—Cassel found 1.2 per cent. syphilitic infants among 31,306 treated in his policlinic in Berlin from 1909 to 1924. The war and after-war period did not show a total increase, but the relative percentage of syphilis in illegitimate children became higher (3.3 per cent.). The success of propaganda for breast nursing lowered the death rate of these children.

Klinische Wochenschrift, Berlin

4: 681-728 (April 9) 1925

*Pneumonia in Children. S. Engel.—p. 681.
*Prognosis of Contracted Kidneys. F. G. J. Dubois.—p. 684.
*Sedimentation and Circulatory Disturbances. K. v. Neergaard.—p. 689.
*Protein Minimum. W. Lueg and Flaschenträger.—p. 694.
*Potassium in Diabetic Hyperglycemia. R. Semler.—p. 697.
*Virulence of Germs in Vagina. N. C. Louros and Fuss.—p. 698.
Congenital Subluxation of Shoulders. L. Frosch.—p. 701.
Sachs' Test. E. Pieper.—p. 702.
*Thymus and Growth Vitamin in Growth. K. Scheer.—p. 702.
*Action of Diiodotyrosin and Thyroxin. Romeis and v. Zwehl.—p. 703.
Coccogenic Sycosis. G. Stümpke.—p. 704.
Revision of Penal Code. G. Strassmann.—p. 708.
*Procain-Epinephrin Tablets. J. Hillen.—p. 726.
Open Letter to the Pharmazeutische Zeitung. W. Heubner.—p. 727.

Pneumonia in Children.—Engel found regularly in the paravertebral lobular pneumonia of infants a predilection for the posterior portion of the right upper lobe, and to a less degree of the center of the left lower lobe. This seems to be due to a relative atelectasia of these parts. An infant's chest is not capable of much distention, and is practically in the inspiration position. Therefore the air intake can be increased only by tachypnea, not by deeper respiration. The imprints of the ribs (or, better, the intercostal bulgings of the lungs) were quite pronounced in infants who were dyspneic. This phenomenon—and with it the typical localization of the pneumonia—becomes rarer after the first year. The diffuse lobular pneumonia in infants causes surprisingly slight physical symptoms, in spite of the gravity of the affection. Lobar pneumonia affected the right upper lobe in twenty-seven, the left lower lobe in three out of his thirty infants less than 12 months old. This predilection is evident in the first three years of life. It may be due partly to the same mechanical factors which condition the localization of the paravertebral dystelectatic pneumonia. The left upper lobe, which usually remains free, has its regional lymph nodes outside of the lungs, in the mediastinum along Botalli's duct and the arch of the aorta—not in the hilum. The summer peak of mortality of children from gastro-intestinal diseases has been superseded by the winter and spring peak from respiratory affections. Scarlet fever and diphtheria kill fewer children than the pneumonia complicating measles and whooping cough.

Prognosis of Contracted Kidneys.—Dubois determined the ratio between the urea nitrogen (xanthydrol method) and the total noncoagulable nitrogen. When the former made up more than 75 per cent. of the latter, the patients died within a few months even if the absolute figures had not been high.

Sedimentation Speed and Circulatory Disturbances.—Neergaard believes that clumps of erythrocytes may be unable to pass the capillaries in patients with increased sedimentation speed. This may account for certain circulatory disturbances.

Protein Minimum.—Lueg and Flaschenträger fed large amounts of oil and even stearic and oleic acid to dogs and frogs kept at a protein minimum. No acetonuria was obtained and the blood sugar was higher than during fasting. This speaks for a formation of sugar from fat, and against a strict antiketogenic ratio in health.

Potassium in Diabetic Hyperglycemia.—Semler injected slowly 0.5 to 0.8 gm. of potassium chlorid in 10-16 c.c. of water intravenously in diabetic patients. After an initial slight rise, the blood sugar became a little lower (minimum after one hour). In two hours it reached its previous level of sugar. The daily excretion remained the same. Oral ingestion of 5 gm. had no effect. Calcium chlorid usually raised the blood sugar a little.

Virulence of Germs in the Vagina.—Louros and Fuss soaked several silk threads in cultures of vaginal germs and immersed them for increasing periods of time (from ten to ninety minutes) in a 0.5 per cent. solution of methylene blue and sodium chlorid. All the germs which gave a positive Ruge-Philipp virulence test, were resistant. Others which were resistant caused local inflammations. Strains which could be killed by the methylene blue produced no infection.

Thymus and Growth Vitamin in Growth.—Scheer found that addition of an emulsion from the thymus to other cells (especially muscles) caused a greater hydration of them than the addition of other organs. The optimum is at a concentration of 0.2-0.02 per cent. of thymus substance, and does not depend on the concentration of hydrogen ions. Funk's growth vitamin (from yeast) has a similar effect. This may account for the influence of both substances on growth, and for some close relation between them.

Action of Diiodotyrosin and Thyroxin.—Romeis and Zwehl found a decrease in liver glycogen and a much more marked loss in weight in white mice treated with diiodotyrosin than in the controls receiving sodium iodid and the same amount of food. Thyroxin produced the same effect when used in 500-1,000 times smaller amounts. When they used a hundredfold more diiodotyrosin than the minimum thyroxin necessary for protection against acetonitril poisoning, the female mice resisted the poison, but the males succumbed.

Procain-Epinephrin Tablets.—Hillen found less epinephrin in the commercial procain-epinephrin tablets than indicated.

Medizinische Klinik, Berlin

21: 529-568 (April 10) 1925

*Tissue Cultures. A. Fischer.—p. 529.
Twenty-Five Years of Cancer Treatment. F. Blumenthal.—p. 533.
*Tenderness of Right Vagus. M. Kappis.—p. 536.
*Surgical Treatment of Nephritis. L. Casper.—p. 539.
Questionnaire on Standardization of Syringes. Brandenburg.—p. 542.
*Surgical Articles Left in Abdominal Cavity. Riedinger.—p. 544.
Perforation of Gastric Ulcer. K. Guth.—p. 546.
*Blocking the Sympathetic with Phenol. K. Doppler.—p. 547.
Uniform Roentgen Dosimetry. E. Weber and H. Prelinger.—p. 549.
Cancer and Its Treatment. O. Strauss.—p. 554. Cont'd.
Immunity in Typhus. S. Lichtenstein.—p. 556.
Criticism of an Official Decision on Social Insurance and Physicians. Wreschner.—p. 564.
Medicolegal Import of Sex Perversions. Friedländer.—p. 566. Cont'd.

Cultivation of Tissues Outside of the Organism.—Fischer reviews the results of tissue cultures. He was able to observe in vitro the complete overgrowth of a piece of muscle by Peyton Rous sarcoma tissue within two days after inoculation with a single sarcoma cell. The strain is still malignant, although it has been cultivated for more than a year in vitro.

Tenderness of Right Vagus.—Kappis observed that direct irritation of the pneumogastric, distad to the superior laryngeal nerve, produced pain in a considerable percentage of patients (among forty subjects, in fourteen when the cervical, and in twenty-eight when the thoracic portion was irritated).

Surgical Treatment of Nephritis.—Casper obtained no cure of nephritis in any one of his fifty decapsulated patients. The operation cures only some of the symptoms, such as the pains in "nephritis-colic," anuria in subacute nephritis, and hemorrhages. It has the same action as denervation of the kidney, but is preferable to this. Roentgen irradiation may also have a good effect. The operation itself acts as a strong shock treatment.

Surgical Articles Left in Abdominal Cavity.—Riedinger reviews the literature on foreign bodies left in the abdomen during laparotomies. Even the method of counting by several persons, which seems to be the best devised so far, fails sometimes. He regards the accident as due to the general human lack of perfection. The German supreme court declared in 1913, against the opinion of experts, that it is possible to find a safe method for preventing these accidents. He suggests that the court should give some hint of how to do it.

Blocking the Sympathetic with Phenol.—Poppler smears a 5 per cent. solution of phenol over the gastric artery previous to resection of the stomach. He believes that the hyperemia promotes the healing. He observed that the evacuation of the stomach is not so fast in these patients as in others without this blocking of the sympathetic nerves. He suggests the use of the same method on endocrine organs, such as the pancreas, thyroid, testis and ovary.

Monatsschrift für Kinderheilkunde, Leipzig

29: 673-768 (March) 1925

The Blood Platelets in Infections. Beck.—p. 673.
*Shifting of the Neutrophils. J. Schmid.—p. 681.
Whooping Cough. E. Kramár.—p. 697.
"The Hemoclinical Status." F. Hamburger.—p. 715.
Mineral Content of Infant Brain, Normally and in Toxemia. F. Thoenes.—p. 717.
Gonorrheal Arthritis in Week-Old Infant. H. Knauer.—p. 725.
"Explanation of Trousseau Phenomenon." O. Tezner.—p. 728.
Osteomyelitis in the Spine in Infants. D. Stöhr.—p. 730.
*Helminthiasis in Children. H. Brüning.—p. 736.

Shifting of the Neutrophils.—Schmid emphasizes that the Arneth-Schilling method is as valuable for diagnosis in children as in adults. As the blood picture is less stable in children, caution in interpretation of the shifting to the left is advised, particularly in infants, and especially in the prematurely born. Charts of the differential blood counts often are more instructive than the fever curve as to the course of a toxic or infectious disease. He agrees with Schilling that, at all ages, increased shifting to the left indicates an aggravation, regression of the shifting, an improvement.

Helminthiasis with Special Reference to Children.—Brüning presents a general review of the 1923 literature on this subject. In the latest series of five cases of poisoning from oil of chenopodium, its administration had not been necessary in four—all of them fatal. This brings to twenty-nine the cases of poisoning from this vermifuge on record; 69 per cent. terminated fatally.

Münchener medizinische Wochenschrift, Munich

72: 585-622 (April 10) 1925

*Prevention of Puerperal Complications. F. Lichtenstein.—p. 585.
*Diphtheria Bacilli in Wounds in Horses. Kliewe and Westhues.—p. 587.
*Syphilis in Glass-Blowers. F. Jacoby.—p. 589.
Spasmophilia and Trigeminal Neuralgia. J. Ratner.—p. 591.
Rheumatic Foot Disturbances. K. Port.—p. 592.
Symptomatology of Tetany in Infants. A. Bratusch-Marrain.—p. 593.
Venereologic Statistics. L. Voigt.—p. 593.
Recurring Gallstone Ileus. K. Hille.—p. 597.
*Long Sojourn of Aspirated Foreign Body. H. Beyreuther.—p. 598.
*Technic of Intravenous Injection. T. Benedek.—p. 598.
Parallel Serologic Reactions in Syphilis. E. Meinicke.—p. 599.
*"Psychotraumatic Dysmenorrhea." J. Novak.—p. 599.
First Aid in New York. G. Rosenburg.—p. 599.
Renal Calculosis. F. Umber.—p. 601.
University Institute for Physical Culture. Huntemüller.—p. 602.

Prevention of Puerperal Complications.—Lichtenstein endeavors to keep the uterus after delivery as small as possible. Since the intra-abdominal pressure is two and a half times higher in the erect than in the recumbent position, he has the woman squat (after catheterization) immediately after the baby is born, and for three quarters of an hour after the expulsion of the placenta. The latter came spontaneously in all his cases, and the bleeding was less than with the usual method. Atonia did not occur, nor the otherwise frequent chill.

Diphtheria Bacilli in Wounds in Horses.—Kliewe and Westhues found among seventy horses with various wounds, 17 per cent. infected with true diphtheria bacilli.

Syphilis in Glass-Blowers.—Jacoby describes oral syphilitic infection in glass-blowers.

Aspirated Foreign Body Remaining Long in the Lung.—Beyreuther relates the history of a man who had been treated repeatedly for pulmonary symptoms. He died from an empyema. Necropsy revealed a vertebra of a goose at the bifurcation of the trachea. He had aspirated the bone probably about ten years before.

Technic of Intravenous Injection.—Benedek uses the external jugular vein for injections in patients with unsuitable veins of the upper extremities. The patient reclines horizontally, and turns the head to one side. As soon as he presses with his mouth closed, the vein, which is at least as thick as a pencil, appears even in the fattest subject. The patient must breathe calmly after the vein is punctured.

"Psychotraumatic Dysmenorrhea."—Novak regards every dysmenorrhea as a neurosis which is conditioned by the menstrual changes of the endocrine system and metabolism, but which has its roots in a previous psychic trauma.

Wiener klinische Wochenschrift, Vienna

38: 399-424 (April 9) 1925

*Tissue Cultures and Cancer. R. Erdmann.—p. 399.
*Cancer After Gynecologic Irradiation. P. Werner.—p. 403.
*Diuretics. M. Grossmann and J. Sandor.—p. 405.
*Zittmann's Decoctum. F. Lasch and A. Perutz.—p. 407.
*Traumatic Sclerodermia. F. M. Groedel and G. Hubert.—p. 409.
Bronchial Asthma. K. Hajós.—p. 410.
Early Diagnosis of Diabetes. A. M. Rosenstein.—p. 412.
The Gastein Hot Springs. O. Gerke.—p. 413.
*Hypertonia and Hypertension. J. Pal.—p. 414.
Poisonings. A. Haberda. Supplement.—p. 1-16.

Cultivation of Tissues Outside the Organism, and Cancer.—Erdmann had negative results when implanting epithelial cells or stroma or their mixtures, isolated from cancers and cultivated for a longer period. Culture of spleen tissue in plasma from cancer rats revealed very large cells. She believes that a change of the function of the reticuloendothelial system has to precede a cancer.

Cancer After Gynecologic Irradiation.—Werner observed eight cases of cancer of the genital organs among 2,680 women who had been treated with roentgen rays because of benign gynecologic affections. This (0.3 per cent.) is a much lower percentage than that of malignancy in gynecologic affections in general (5 per cent.) and speaks more for a protection than for an injury by the roentgen rays.

Diuretics.—Grossmann and Sandor confirm the strong diuretic action of theobromin in healthy subjects, and a moderate influence in renal disease. Theobromin-sodium salicylate (diuretin) gives a weak diuresis, and only in patients with anacidity of the stomach. In retention of water of hepatic origin the preparations of the purin group had no effect.

Zittmann's Decoctum.—Lasch and Perutz were able to demonstrate a resorption of radix sarsaparillae in animals only when the intestinal tract had been injured—especially by calomel. One third of the men who received it reacted with a slight rise in blood cholesterol. They regard the action of "Zittmann's decoction" as an oral shock treatment.

Traumatic Sclerodermia.—Groedel and Hubert report a case of sclerodermia which developed shortly after the patient had met with an accident (fractures in both arms).

Hypertonia and Hypertension.—Pal regards an increased tonus of the arteries as cause of permanent hypertension. The transitory crises of high pressure yield to venesection, nitrites, papaverin and other preparations. Paravertebral injections of procain, and fever, prevent them by lowering the tonus of all the muscles. It is quite possible that the patients may need their high blood pressure. Primary hypertonia is an angiotonic neurosis, and is amenable to treatment by suggestion.

Zeitschrift für Tuberkulose, Leipzig

42: 97-176 (March) 1925

Anatomy and Origin of Tuberculosis in Infants. A. Ghon et al. —p. 97. Conc'n.
Lupus in Lithuania. C. Finkelstein.—p. 111.
*Mixed Infection in Pulmonary Tuberculosis. A. Becker.—p. 118.
*Pulmonary Tuberculosis. F. L. v. Muralt and B. Papanikolau.—p. 136.
Notification of Pulmonary Tuberculosis Needed. Bauer.—p. 144.
Silicic Acid in Treatment of Tuberculosis. M. Kärcher.—p. 147.

Mixed Infection in Pulmonary Tuberculosis: Treatment with Autogenous Mixed Vaccines.—On the basis of careful study of twenty-two cases of chronic tuberculosis and experimental treatment with the vaccine, Becker concludes that mixed infection is an essential factor in the origin and in the lesions of pulmonary tuberculosis. This explains the inefficacy of specific therapy to date. The mixed infection seems to paralyze the resisting forces, and treatment with an autogenous mixed vaccine combats this. Almost all of the seventy-five cases treated with an autogenous vaccine showed improvement to a degree seldom attained by previous methods in cases of like severity. The tubercle bacilli disappeared from the sputum in most cases, generally after the first injection. Whether the natural resistance of the organism is restored or whether the tubercle bacilli are merely deprived of a favorable culture medium, the benefit is encouraging.

Sedimentation Test of Erythrocytes and Arneth Count of Neutrophils in Pulmonary Tuberculosis.—In serial examinations in thirty-five cases von Muralt and Papanikolau found that retarding of the sedimentation and shifting to the right in the Arneth picture, under exclusively hygienic and dietetic treatment, or under tuberculin treatment, or with artificial pneumothorax, always accompanied improvement. With tuberculin treatment, it is an indication for continuation. Acceleration and shifting to the left signifies an aggravation, and contraindicate further tuberculin treatment. The tests are of particular value in cases of artificial pneumothorax where auscultation is impossible.

Zentralblatt für Gynäkologie, Leipzig

49: 785-848 (April 11) 1925

*Mental Source of Physical Symptoms in Women. A. Mayer.—p. 785.
*Idem. H. Fischer.—p. 800.
Perforation of Uterus with Resection of Intestine. Schugt.—p. 814.
Standard Measurements of Female Pelvis. L. Litten.—p. 817.
*Straight Engaging of Fetal Head. B. Bauch.—p. 821.
Spontaneous Abortion by Unnatural Route. Z. Bublitschenko.—p. 827.
Simple Test of Pituitary Extracts. W. H. Treuter.—p. 831.

Mental Source of Physical Symptoms in Women.—Mayer reiterates that mental factors may induce the chief symptoms in gynecology, and discusses the rôle of these factors in the various phenomena. The diagnosis of physical disturbances due to mental influences depends on the absence of physical findings, the presence of certain mental conditions, and also on the personality of the physician. He points to dangers in psychotherapy, saying, "Operative treatment means cutting into the body; psychotherapy means cutting into the soul." Fischer contributes an analysis of the biologic and psychologic mechanism, as a basis for interpretation of the clinical findings and indications for psychotherapy.

Symphysiotomy in Treatment of Straight Engaging of Fetal Head.—Bauch reports a case in a primipara, aged 39, with anterior occipital presentation and the head immovable in the narrow pelvic inlet. After high forceps failed to move the head, subcutaneous symphysiotomy was resorted to, with speedy delivery of the infant, which was asphyxiated but was soon revived, and rapid recovery of the mother. He would admit careful attempts with the forceps in case of not too great disproportion between the fetal head and pelvic inlet. Otherwise, subcutaneous symphysiotomy is the preferred method, and while generally indicated for multiparas may also be applied in primiparas. It saved the child in his case. Cesarean section should be considered only in cases of extreme disproportion. Fischel made subcutaneous symphysiotomy in a parallel instance in a primipara (with eclampsia) with equally good result.

Časopis lékařů českých, Prague

64: 561-600 (April 11) 1925

Tabetic Arthropathies. I. Stratil.—p. 561.
Pathology of Trochlear Process of the Calcaneum. A. Morávek.—p. 565.
*Diagnosis of Bronchiectasia. Švejcar and Dreuschuch.—p. 568.
*Physiologic Titration of Digitalis. B. Bouček.—p. 571.
*Pulmonary Tuberculosis and Pregnancy. V. Rubeška.—p. 576. Conc'n.
Production of and Titration of Insulin. I. Mačela.—p. 581.
French Views on Treatment of Ozena. V. Horníček.—p. 583.

Iodized Oil in Diagnosis of Bronchiectasis.—Švejcar and Dreuschuch demonstrate the superiority of roentgenography after injection of iodized oil for diagnosis of bronchiectasis in children. It seems that it is not rare, and that the majority of cases of bronchiectasis in adults may be traced far back.

Physiologic Titration of Digitalis.—Bouček finds that proprietary preparations of digitalis, even from high-grade sources, do not always contain the alleged amount of the active substances. He believes that titrated powder from leaves will always keep its place in therapeutics.

Pulmonary Tuberculosis and Pregnancy.—Rubeška observed 205 (67 per cent.) favorable results in 302 cases of artificial abortion in tuberculous women. Without the abortions, improvement might have been anticipated only in 14 per cent.

The intervention is practically without danger under good surgical conditions. He discusses the preventive methods, and the technic of abortion and sterilization.

Russkaia Klinika (Moscow)

3: 147-306 (Feb.) 1925. Partial Index

*Thyroid Treatment and Gastric Secretion. S. Badylkes.—p. 199.
*Morphin for Pains with Gastric Ulcer. G. Smagin.—p. 211.
*Polyarthritis from Thyroid Deficiency. M. Nikolaeff.—p. 217.
Gland Grafting in Nervous Diseases. I. Brodsky.—p. 241.

Thyroid Extract and Gastric Secretion.—Badylkes made nineteen tests with desiccated thyroid extract in ten young and healthy men. Large doses, causing toxic cardiovascular manifestations, reduced the amount of gastric juice, of free hydrochloric acid, and of the total gastric acidity. With smaller doses of the thyroid substance, the gastric secretion increased in 17.5 per cent. of the subjects.

Action of Atropin and Morphin on Gastric Acidity in Ulcer.—Successive use of both drugs in a man with ulcer of the stomach proved, Smagin says, that the inhibiting effect on the gastric acidity is stronger and persists longer with morphin.

Polyarthritis of Thyroid Origin.—Nikolaeff considers the polyarthritis in a woman, aged 43, with congenital thyroid and other endocrine insufficiency, as an "endocrine polyarthritis." Organotherapy combined with parenteral protein injections gave good results, the first benefit that had been realized in six years of treatment.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

1: 1557-1680 (April 4) 1925

Disciplinary Tribunal. G. van Rijnberk.—p. 1558. See News, p. 1583.
*Hereditary Familial Nervous Affection. E. H. Hermans.—p. 1562.
*Vaccine Therapy of Whooping Cough. F. van der Zande.—p. 1575.
Improved Absorption Water Filter. L. K. Wolff.—p. 1590.
Historical Studies of Plague. J. J. van Loghem.—p. 1599.
Medical Folklore in Broek District. C. Bakker.—p. 1603.

Hereditary and Familial Symmetrical Muscular Atrophy.—Hermans calls attention to a nervous affection which by exclusion he classifies as the peroneal type of progressive muscular atrophy, presented by six men and four women in three generations of a certain family. The fourth generation are still too young to have developed it. The transmission was always in the female line.

Vaccine Treatment of Whooping Cough.—Van der Zande reports very encouraging results in forty-five cases. He warns, however, that the vaccine must be made from the special type of whooping cough bacilli involved in the case. Agglutination tests have demonstrated two types. Only one of his patients failed to show benefit.

Acta Medica Scandinavica, Stockholm

62: 1-196 (April 1) 1925

*Diabetes with Tuberculosis. E. Lundberg.—p. 1; 46.
*Heredity of Diabetes. S. Hansen.—p. 85.
Chronic and Secondary Suprarenal Insufficiency. A. Barkman.—p. 101.
Motor Disturbances in Tabes. F. Leiri.—p. 116.
*Diabetes in Denmark in 1924. K. A. and P. Heiberg.—p. 126.
Free and Combined Pepsin in Stomach Contents. K. Kjer.—p. 131.
Case of Periodic Bulimia. T. E. H. Thaysen.—p. 142.
*Blood Pressure in Bronchial Asthma. W. Kerppola.—p. 162.
Pathologic Anatomy of Amyotrophic Lateral Sclerosis. Barkman.—p. 179.
*Effect of Insulin on Tissue Respiration. L. Brahme.—p. 188.

Parainsulin Production in Diabetes with Tuberculosis.—On the basis of eight personal observations and six from the literature, Lundberg states that in proportion as the tuberculosis progresses, the glycosuria and acetonuria disappear; the tolerance for carbohydrates increases; the need of insulin decreases, and patients under insulin treatment are subject to sudden attacks of hypoglycemia. In the eight fatal cases, the cause of death was always the tuberculosis. Acidosis was generally absent. None of the patients presented secondary symptoms of diabetes, such as pruritus and furuncles. He explained these conditions in the tuberculous diabetics by demonstrating the presence in tuberculous tissue of a substance which he calls parainsulin with an action similar to that of insulin. This substance could not be found in tubercle bacilli, in tuberculin, or in healthy tissues. The tuberculosis may escape detection in these cases without radioscopic examination.

Heredity of Diabetes Mellitus.—Hansen says that a substandard condition of the islands of Langerhans is now known to be the cause of diabetes, and this condition is inherited, and is due to multiple factors. Exogenous pancreatic disturbances are of little significance in diabetes. The frequency of demonstrable hereditary cases of diabetes cannot be estimated because of the lack of research along these lines. It is evidently more common than hitherto suspected.

Diabetes in Denmark in 1924.—Heiberg and Heiberg estimate the number of diabetics between the ages of 15 to 40 at from 350 to 380, the total number approximately at 3,000. The population of Denmark in 1924 was 3,388,900. The total diabetes mortality was 532.

Blood Pressure and Vasomotor Irritability in Bronchial Asthma.—A rise in blood pressure of from 25 to 100 mm. of mercury occurred during the attack in fifteen of Kerppola's twenty cases, parallel to it, and decreasing at the end of the attack. On suppression of the attack by epinephrin the tension at once dropped somewhat, with return to normal later. The hypersensitiveness to epinephrin elicits a reaction after a dose ineffective in normal persons, the intensity not proportional to the amount of epinephrin, but relatively less as the dose increases. A reaction to 0.005 mg. or less should be considered pathologic. He assumes that the action of epinephrin in arresting the attack of asthma is due to a paralyzing effect after the vasoconstriction. Nonspecific desensitization measures aid in combating the predisposition.

Effect of Insulin on Tissue Respiration, Determined by the Microrespirometer.—In Brahme's experiments on frog muscles, the greatest increase in gas interchanges obtained with insulin amounted to 42 and 28 per cent. of the carbon dioxid production, and 44 and 27 per cent. of the oxygen intake. This direct determination agrees approximately with Ahlgren's results by the methylene blue method. Brahme's highest values were obtained, however, with concentrations between 10^{-7} and 10^{-8}, which are considerably higher than Ahlgren's 10^{-9} and 10^{-11}. He mentions that in unpublished experiments on frogs with extirpated liver, the gas interchanges at certain times exceeded 200 per cent., an increase also found in isolated cases in frogs without extirpation of the liver.

Finska Läkaresällskapets Handlingar, Helsingfors

67: 215-301 (March) 1925

The Pallidum Syndrome. F. Leiri.—p. 215.
*Placenta Praevia, 1910 to 1924. S. Hjelt.—p. 238.
Study of Pathology in Twins. O. Heinonen.—p. 256.

Placenta Praevia in Helsingfors Maternity, 1910 to 1924.—In the 118 cases the maternal mortality was 5.93 per cent., the total infant mortality, 63.56 per cent. Cesarean section was made seven times, with no mortality. Hjelt urges timely sending of all placenta praevia cases to the nearest maternity, without unnecessary tamponing or examination.

Ugeskrift for Læger, Copenhagen

87: 213-242 (Feb. 26) 1925

Valedictory Lecture on Ophthalmology. Tscherning.—p. 213.
*Vaccination Against Whooping Cough. A. H. Meyer et al.—p. 217.
Priority Claim for Kidney Test. I. Riising.—p. 227.
Nibbling of Cadavers by Mice. J. S. Møller.—p. 233.

Vaccination Against Whooping Cough.—Meyer and his co-workers tabulate the results of vaccine therapy in different countries, the whole testifying to a good prophylactic and attenuating action.

87: 315-344 (March 26) 1925

Sanocrysin Treatment of Pulmonary Tuberculosis. K. Faber.—p. 315.
Phlebitis Versus "Dermatomyositis." A. Jørgensen.—p. 329.
"Acute Dermatomyositis." H. Heckscher.—p. 329.
*Sciatic Neuralgia in Incipient Tabes. C. Gram.—p. 330.
Importance of an Early Diagnosis. E. Collin.—p. 337.

Sciatic Neuralgia with Incipient Tabes.—Gram's patient presented what seemed to be rebellious simple sciatica with lumbago. The Wassermann reaction was positive in the blood but negative in the spinal fluid. The permanent recovery under treatment for syphilis confirmed that the pains had been due to a meningomyomyelitis which retrogressed under the specific treatment.